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Oceans and the law of the sea

Oceans and the law of the sea

Report of the Secretary-General

Addendum

Summary

The present report provides an updated overview of developments relating to the implementation of the United Nations Convention on the Law of the Sea and the work of the Organization, its specialized agencies and other institutions in the field of ocean affairs and the law of the sea since the preparation of the report in March 2008 (A/63/63). As such it is also addressed to the Meeting of States Parties to the Convention under the agenda item entitled "Report of the Secretary-General under article 319 for the information of States parties on issues of a general nature, relevant to States parties that have arisen with respect to the Convention".

* A/63/150 and Corr.1.

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Contents

		Page
	Abbreviations	5
I.	Introduction	7
II.	The United Nations Convention on the Law of the Sea and its implementing Agreements	7
	A. Status of the Convention and its implementing Agreements	7
	B. Meeting of States Parties	8
	C. Informal consultations of States Parties to the Untied Nations Fish Stocks Agreement	9
III.	Maritime space	9
	A. Overview of recent developments regarding State practice, maritime claims and the delimitation of maritime zones	9
	B. Deposit and due publicity	10
	C. Geographic Information System facilities	11
	D. Commission on the Limits of the Continental Shelf	13
	1. Consideration of the submission made by Australia	14
	2. Consideration of the submission made by New Zealand	14
	3. Consideration of the joint submission made by France, Ireland, Spain and the United Kingdom of Great Britain and Northern Ireland	14
	4. Consideration of the submission made by Norway	14
	5. Consideration of the submission made by France	14
	6. Submission made by Mexico	15
	7. New submissions	15
	E. The Area: the work of the International Seabed Authority	15
IV.	Developments relating to international shipping activities	17
	A. Economic aspects of shipping	17
	B. Safety of navigation	17
	1. Safety of ships	17
	2. Transport of dangerous goods	18
	3. Hydrographic surveying and nautical charting	19
	4. Routes used for international navigation	20
	C. Implementation and enforcement	22
	D. Maritime casualties	23
	E. Wreck removal	23
V.	People at sea	24
	A. Seafarers and fishers	24

1. Seafarers 24
2. Fishers 25

B. International migration of people by sea 25

VI. Maritime security 26

A. Terrorist acts against shipping and offshore installations 27

B. Piracy and armed robbery against ships 28

C. Illicit traffic in narcotic drugs and psychotropic substances 29

VII. Marine science and technology 30

A. Marine science 30

B. Early warning systems 32

C. Recent developments in marine technology 33

VIII. Conservation and management of marine living resources 34

A. Marine fishery resources 34

B. International Whaling Commission 35

IX. Marine biological diversity 36

A. Recent measures to address activities and pressures on marine biological diversity 36

1. General Assembly Ad Hoc Open-ended Informal Working Group 36
2. Conference of the Parties to the Convention on Biological Diversity 37

B. Initiatives regarding specific ecosystems 38

C. Measures for specific species 39

D. Genetic resources 41

X. Protection and preservation of the marine environment and sustainable development 42

A. Introduction 42

B. Ecosystem approaches 43

C. Pollution from land-based activities 46

D. Pollution from ships 47

E. Introduction of invasive alien species 49

F. Ocean noise 51

G. Waste management 52

1. Disposal of wastes 52
2. Transboundary movement of wastes 53

H. Ship breaking, dismantling, recycling and scrapping 55

I. Liability and compensation 56

J. Area-based management tools 59

K. Regional cooperation 61
1. Antarctic 61
2. Arctic 62
3. Baltic 62
4. East Asian Seas 63
5. Mediterranean Sea 63
6. North-East Atlantic 64
7. North-West Pacific 65
8. Pacific 65
9. Red Sea and Gulf of Aden 66
10. Western Africa 66
11. Wider Caribbean 67
12. Other regional organizations 67
L. Small island developing States 68
XI. Climate change and oceans 70
A. Impacts of climate change on the oceans 70
B. Mitigating the impact of climate change and adapting to projected climate change 71
C. Measures to reduce greenhouse gases in the context of ocean-related activities 73
1. Reduction of greenhouse gas emissions from ships 73
2. Ocean fertilization and carbon sequestration 74
XII. Settlement of disputes 76
A. International Court of Justice 76
B. Court of Justice of the European Communities 76
XIII. International cooperation and coordination 77
A. United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea 77
B. Regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects 78
C. Oceans and Coastal Areas Network 79
D. Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection 80
XIV. Capacity-building activities of the Division for Ocean Affairs and the Law of the Sea 80
A. Fellowship programmes 81
B. Training courses 81
C. Trust funds 82

Abbreviations

ACCOBAMS	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
ASCOBANS	Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas
ASEAN	Association of Southeast Asian Nations
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
EEZ	Exclusive economic zone
EC	European Commission
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FSI	IMO Sub-Committee on Flag State Implementation
GEF	Global Environment Facility
GESAMP	Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
GIS	Geographic Information System
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities
HELCOM	Baltic Marine Environment Protection Commission
IHO	International Hydrographic Organization
ILO	International Labour Organization
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission of UNESCO
IOM	International Organization for Migration
IUU fishing	Illegal, unreported and unregulated fishing
IWC	International Whaling Commission
LME	Large marine ecosystem
LRIT	Long-range identification and tracking
MARPOL	International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto
MEPC	IMO Marine Environment Protection Committee
MOU	Memorandum of understanding
MPA	Marine protected area
MSC	IMO Maritime Safety Committee

NAV	IMO Sub-Committee on Safety of Navigation
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
SOLAS	International Convention for the Safety of Life at Sea
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNHCR	Office of the United Nations High Commissioner for Refugees
WMO	World Meteorological Organization

I. Introduction

1. The reports of the Secretary-General on oceans and the law of the sea serve as a basis for the annual review and evaluation of the implementation of the United Nations Convention on the Law of the Sea (UNCLOS) and other developments relating to ocean affairs and the law of the sea by the General Assembly, as the global institution with the competence to undertake such a review.

2. The present report provides the General Assembly with an update of developments in the field of oceans and the law of the sea since the submission[1] of the main report (A/63/63) to the ninth meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea (the "Consultative Process"). It should be read in conjunction with the report of the Secretary-General on sustainable fisheries (A/63/128); the Joint Statement of the Co-Chairpersons of the Ad Hoc Open-ended Informal Working Group to study issues relating to the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction (the "General Assembly Ad Hoc Open-ended Informal Working Group") (see A/63/79, annex); the report of the eighteenth Meeting of States Parties to UNCLOS (SPLOS/184) and the report on the work of the Consultative Process at its ninth meeting (A/63/174 and Corr.1). The Secretary-General will also submit to the General Assembly at its sixty-third session, pursuant to resolutions 61/222 and 62/215, a study on the assistance available to and measures that may be taken by developing States, in particular least developed countries and small island developing States, as well as coastal African States to realize the benefits of sustainable and effective development of marine resources and uses of the oceans within the limits of national jurisdiction.

II. The United Nations Convention on the Law of the Sea and its implementing Agreements

A. Status of the Convention and its implementing Agreements

3. On 9 July 2008, the Congo deposited its instrument of ratification of UNCLOS. Consequently, as at 1 August 2008, the number of parties to UNLCOS stands at 156, including the European Community. The number of parties to the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea increased to 133, following the deposit of the instruments of ratification by Cape Verde on 23 April 2008, and the expression of the consent to be bound by the Congo on 9 July 2008. The number of parties to the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the "United Nations Fish Stocks Agreement") rose to 71, including the European Community, as a result of the accession by Hungary (16 May 2008), Oman (14 May 2008) and Palau (26 March 2008).

[1] The report was finalized on 10 March 2008.

B. Meeting of States Parties

4. The eighteenth Meeting of States Parties to UNCLOS was held at United Nations Headquarters from 13 to 20 June 2008, under the Presidency of H.E. Mr. Yuriy Sergeyev (Ukraine). At the outset, the Meeting took note with appreciation of the annual report of the International Tribunal for the Law of the Sea for 2007 (SPLOS/174) introduced by the President of the Tribunal, as well as the information reported by the Secretary-General of the International Seabed Authority and the Chairman of the Commission on the Limits of the Continental Shelf (the Commission).

5. The Meeting then dealt with budgetary matters of the International Tribunal for the Law of the Sea. It approved the budget of the International Tribunal for the biennium 2009-2010 in the amount of €17,515,100, together with the staffing table for the Registry of the Tribunal for 2009-2010 (see SPLOS/180). The Meeting took note of the report on budgetary matters of the Tribunal for the financial periods 2005-2006 and 2007-2008 (SPLOS/175), and appointed the firm BDO Deutsche Warentreuhand AG as the financial auditor of the Tribunal for the next four-year period (see SPLOS/184, para. 51).

6. On 13 June 2008, the Meeting proceeded with the election of seven members of the Tribunal to fill the places of those members whose terms of office would expire on 30 September 2008, and elected the following seven members for a term of nine years commencing on 1 October 2008: Joseph Akl (Lebanon), Boualem Bouguetaia (Algeria), Vladimir Vladimirovitch Golitsyn (Russian Federation), José Luis Jesus (Cape Verde), Vicente Marotta Rangel (Brazil), P. Chandrasekhara Rao (India) and Rüdiger Wolfrum (Germany).

7. The Meeting also addressed the workload of the Commission in conjunction with the ability of States, particularly developing States, to fulfil the requirements of article 4 of annex II to UNCLOS, as well as the decision contained in SPLOS/72, paragraph (a). It adopted a decision (SPLOS/183), according to which it is understood that the time period in UNCLOS and in SPLOS/72 may be satisfied by submitting to the Secretary-General preliminary information indicative of the outer limits of the continental shelf beyond 200 nautical miles and a description of the status of preparation and intended date of making a submission in accordance with the requirements of article 76 of UNCLOS and with the Rules of Procedure (the Rules) and Scientific and Technical Guidelines of the Commission (the Guidelines). The decision also provides that pending the receipt of the submission in accordance with the requirements of article 76 of UNCLOS and the Rules and the Guidelines, such preliminary information shall not be considered by the Commission, and that such preliminary information is without prejudice to the submission in accordance with the requirements of article 76 of UNCLOS and the Rules and Guidelines, and the consideration of the submission by the Commission. As required by that decision, the Secretary-General will inform the Commission and notify Member States of the receipt of preliminary information and will make such information publicly available, including on the website of the Commission.

8. Other decisions adopted during the Meeting were the following: "Decision on the vacancy in the Commission on the Limits of the Continental Shelf" (SPLOS/181) and the "Decision on the allocation of seats on the Commission and the Tribunal" (SPLOS/182).

9. The Meeting also held an exchange of views under its agenda item "Report of the Secretary-General under article 319 of the United Nations Convention on the Law of the Sea". The full report of the eighteenth Meeting of States Parties is contained in document SPLOS/184.

C. Informal consultations of States Parties to the United Nations Fish Stocks Agreement

10. The seventh round of informal consultations of States Parties to the United Nations Fish Stocks Agreement was held in New York, from 11 to 12 March 2008, with the objective of discussing the implementation of the Agreement at the regional, subregional and global levels, taking into consideration the outcome of the Review Conference as regards proposed means of strengthening the implementation of the Agreement, promoting wider participation in the Agreement and making any appropriate recommendations to be considered by the General Assembly.[2]

11. It was agreed to recommend to the General Assembly that it request the Secretary-General to: (a) resume in 2010 the Review Conference convened pursuant to article 36 of the Agreement and to begin the necessary preparatory work and adopt budgetary decisions in this regard; (b) to convene an eighth round of informal consultations in 2009 for a duration of at least four days to consider, inter alia, promoting wider participation in the Agreement through a continuing dialogue and initial preparatory work for the resumption of the Review Conference, and to make any appropriate recommendation to the General Assembly; and (c) to present to the resumed Review Conference an updated comprehensive report, prepared in cooperation with the Food and Agriculture Organization of the United Nations (FAO), in accordance with paragraph 2 of article 36 of the Agreement. It was also recommended that the Secretariat be requested, in cooperation with FAO, to compile a comprehensive list of sources of available assistance that could be accessed by developing States to increase their capacity and promote a wider participation in the Agreement.

III. Maritime space

A. Overview of recent developments regarding State practice, maritime claims and the delimitation of maritime zones

12. The present section provides information on developments that have been recently brought to the attention of the Secretariat of the United Nations, some of them having occurred in 2007.

13. *Barents Sea*. On 22 July 2008, the Agreement between the Russian Federation and the Kingdom of Norway on the Maritime Delimitation in the Varangerfjord area, of 11 July 2007[3] was registered with the Secretariat of the United Nations under Article 102 of the Charter of the United Nations (see *Law of the Sea Bulletin* No. 67).

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[2] For the report on the seventh round of informal consultations, see www.un.org/depts/los/convention_agreements/fishstocksmeetings/icsp7report.pdf.

[3] Registration #: I-45114. Date of entry into force: 9 July 2008.

14. *Caribbean Sea.* On 8 February 2007, the "Treaty on maritime delimitation between the Government of the United Mexican States and the Government of the Republic of Honduras", Tegucigalpa, 18 April 2005, was registered with the Secretariat of the United Nations.[4]

15. By a letter dated 13 March 2008, the United Kingdom of Great Britain and Northern Ireland transmitted to the Legal Counsel the text of a joint demarche undertaken by the United Kingdom and the United States of America in relation to the law of the Dominican Republic number 66-07 of 22 May 2007, done on 18 October 2007 (see *Law of the Sea Bulletin* No. 67; see also A/63/63, para. 11).

16. *Irish Sea, North Atlantic Ocean, North Sea, English Channel.* By a letter dated 13 March 2008, the United Kingdom of Great Britain and Northern Ireland transmitted The Continental Shelf (Designation of Areas) (Consolidation) Order 2000, and The Continental Shelf (Designation of Areas) Order 2001. By the same letter, the United Kingdom also transmitted an Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of the Netherlands amending the Agreement of 6 October 1965 relating to the Delimitation of the Continental Shelf under the North Sea between the Two Countries as amended by the Protocol of 25 November 1971, The Hague, 28 January and 7 June 2004. The United Kingdom further transmitted in the same letter the Exchange of Notes between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the Kingdom of Belgium amending the Agreement of 29 May 1991 relating to the Delimitation of the Continental Shelf under the North Sea between the Two Countries, Brussels, 21 March 2005 and 7 June 2005 (see *Law of the Sea Bulletin* No. 66).

17. *Pacific Ocean.* On 1 May 2008, Peru requested the Secretariat of the United Nations to give due publicity to a note related to the dispute concerning the maritime boundary between Peru and Chile (ibid., No. 67).

18. *South China Sea.* On 15 August 2007, the Agreement between the Government of the Socialist Republic of Viet Nam and the Government of the Republic of Indonesia concerning the Delimitation of the Continental Shelf Boundary was registered with the Secretariat of the United Nations.[5]

B. Deposit and due publicity

19. On 14 March 2008, Japan deposited with the Secretary-General, pursuant to article 16, paragraph 2, of UNCLOS, 49 charts and a list of geographical coordinates of points as contained in the Enforcement Order of the Law on the Territorial Sea and the Contiguous Zone (Cabinet Order No. 210 of 1977, as amended by Cabinet Order No. 383 of 1993, Cabinet Order No. 206 of 1996 and Cabinet Order No. 434 of 2001).[6] By a note dated 14 May 2008, China presented the position of its Government with reference to one of the charts deposited by Japan. In a note dated 20 June 2008, Japan transmitted the position of its Government concerning the note from China dated 14 May 2008. Both

[4] Registration #: 1-43571. Date of entry into force: 30 November 2006. The Treaty was published in *Law of the Sea Bulletin* No. 65.

[5] Registration #: 44165. Date of entry into force: 29 May 2007. See *Law of the Sea Bulletin* No. 67.

[6] For the Enforcement Order, see *Law of the Sea Bulletin* No. 66.

communications were circulated to all States Members of the United Nations, as well as States parties to UNCLOS.

20. On 13 May 2008, Palau deposited with the Secretary-General, in accordance with article 75, paragraph 2, of UNCLOS, a chart showing the 200-nautical-mile outer limit of the exclusive economic zone (EEZ) of Palau, as well as the line of delimitation between the Republic of Palau and the Federated States of Micronesia, as contained in the 2006 Palau-Federated States of Micronesia Maritime Boundary Treaty, and the lists of geographical coordinates of points, specifying the geodetic datum, relating to the above-mentioned limit and the line of delimitation.

21. On 20 June 2008, Mauritius deposited with the Secretary-General, in accordance with article 16, paragraph 2, and article 47, paragraph 9, of UNCLOS, five charts and the lists of geographical coordinates of points representing the basepoints and defining the baselines from which the maritime zones of Mauritius shall be measured, as contained in the "Regulations made by the Prime Minister under sections 4, 5 and 27 of the Maritime Zones Act 2005"; together with an illustrative map entitled "Chagos Archipelago: Archipelagic Baselines" (February 2007).[7]

C. Geographic Information System facilities

22. The Secretariat of the United Nations continues to further develop the facilities for the deposit by States parties of charts and lists of geographical coordinates of points concerning the baselines, closing lines, archipelagic baselines, and outer limits of maritime zones, including lines of delimitation, as required by the relevant provisions of UNCLOS. In this connection, the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs ("the Division") continues, in accordance with its mandate, to collect, compile and disseminate information on State practice, in particular national legislation on maritime zones, treaties on the delimitation of maritime boundaries and other relevant reference material. Giving publicity to the deposited and other officially available information[8] is of the utmost importance for ensuring certainty as to the baselines, closing lines, archipelagic baselines, and outer limits of maritime zones, including lines of delimitation, as well as the legal regime applicable within these maritime zones under the national legislation of coastal States.[9]

23. Currently, the deposited lists of coordinates, texts of national legislation and treaties on maritime boundary delimitations are published in the *Law of the Sea Bulletin* and posted on the website maintained by the Division. Deposited charts are available only at the Division and access to them is provided upon request. The Division intends to continue to develop and enhance its services by providing online access to documents related to national legislation, which were circulated among Member States, such as official statements and declarations by States concerning maritime zones and limits, as well as to deposited charts.

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[7] For the text of the Regulations, see *Law of the Sea Bulletin* No. 67.

[8] It is noted that publicity given to the deposited charts and lists of geographical coordinates complements the due publicity which is normally incumbent upon the coastal State concerned.

[9] This procedure does not imply the expression of any opinion whatsoever on the part of the Secretary-General concerning the conformity of national legislation with international law, including UNCLOS.

24. The upgrade of the Geographic Information System (GIS) at the Division is under way in order to take advantage of the potential of current technologies and to respond adequately to the pressing needs of Members States and the international community for official and reliable information. Among recent examples of such needs are the "Guidelines for the implementation of resolution XX-6 of the IOC Assembly regarding the deployment of profiling floats in the high seas within the framework of the Argo Programme", annexed to resolution EC-XLI.4, which were adopted by the Executive Council of the Intergovernmental Oceanographic Commission (IOC) of UNESCO at its forty-first session.[10] These guidelines point out that in accordance with IOC Assembly resolution XX-6 on "The Argo Project" (see IOC-XX/3), an IOC member State must be informed in advance, through appropriate channels, of the deployment in the high seas of any float within the framework of the Argo Programme that may enter its EEZ. For the purpose of an effective application of these Guidelines including, in particular, the notification to be provided by the implementer, the Guidelines state that the charts and lists of geographical coordinates of points, specifying the geodetic datum, duly publicized and deposited by IOC member States with the Secretary-General of the United Nations should be used, or when such information is not available, the IOC member States are encouraged to provide the relevant information to the Secretary-General of the United Nations, to the IOC or to the Argo implementer, as appropriate.

25. The importance of defining the limits of the internal waters and territorial seas of States and determining the geographical area of 1,000 nautical miles off the coasts of coastal States for the implementation of regulation V/19 of the International Convention for the Safety of Life at Sea (SOLAS) on the long-range identification and tracking (LRIT) system[11] was recently highlighted at the International Maritime Organization (IMO). IMO is required to establish and maintain the LRIT Data Distribution Plan and include therein information on the boundaries of the geographic areas within which each Contracting Party is entitled to receive LRIT information about ships in the area. At its eighty-fourth session, the Maritime Safety Committee (MSC), noting the technical constraints of the Data Distribution Plan, agreed that at this stage of its development, the only practical solution was to include simplified geographical polygons in the Plan. Appropriate disclaimers will be posted on the Data Distribution Plan.[12]

26. Other organizations have also proceeded to develop maps, in some cases based on information from academic or commercial sources. For example, the UNEP World Conservation Monitoring Centre has developed a number of maps in order to assist assessing marine biodiversity distribution as well as the current extent and coverage of a number of area-based management tools, such as marine protected areas and fisheries closures. In particular, in collaboration with a number of partners, it has developed an "Interactive map of high seas marine protected areas and key habitat distribution: spatial databases containing information on marine areas beyond the limits of national jurisdiction" (see http://bure.unep-wcmc.org/marine/highseas/viewer.htm). The interactive map includes a layer

[10] Forty-first session of the Executive Council, Paris, 24 June-1 July 2008. IOC/EC-XLI/3 prov., annex II.

[11] For a description of LRIT, see A/61/63/Add.1, paras. 66-70.

[12] Report of the eighty-fourth session of MSC, IMO document MSC 84/24, paras. 6.32-6.40, 6.49-6.54, 6.118 and 6.129.

showing the EEZ of coastal States based on a dataset produced by the Flanders Marine Institute and Information Centre.

27. These examples and other numerous requests emanating from States, their national agencies, as well as international organizations, clearly establish the need for information on maritime limits to be available both from a single, authoritative source and in digital format. This would eliminate the duplication of efforts by United Nations system agencies, programmes and bodies and also avoid the cost of obtaining data in particular from commercial sources which are not necessarily reliable and may not be based on actual information emanating from States.

28. In paragraph 6 of its resolution 59/24, the General Assembly requested the Secretary-General to improve the existing GIS for the deposit by States of charts and geographical coordinates concerning maritime zones, including lines of delimitation, submitted in compliance with UNCLOS, and to give due publicity thereto, in particular by implementing, in cooperation with relevant international organizations, such as the International Hydrographic Organization (IHO), the technical standards for the collection, storage and dissemination of the information deposited, in order to ensure compatibility among GIS, electronic nautical charts and other systems developed by these organizations. Following upon that mandate, the Division has continued to develop its GIS and related database and is ready to expand it to include an Internet distribution system that will disseminate maritime limits in digital format as deposited under UNCLOS or as extracted from information contained in national legislation provided by States or treaties on the delimitation of maritime boundaries registered with the Secretariat under Article 102 of the Charter of the United Nations. For information to be collected, compiled and disseminated to States in a standardized format, the Division initiated the development of a maritime zones layer in the IHO S-100 standard to structure its geographic information database according to the forthcoming specifications of that layer. The States Parties following these specifications when preparing their deposits will enable the Division to include the information as deposited in its GIS and make it available for seamless integration into electronic nautical charts.

D. Commission on the Limits of the Continental Shelf

29. The Commission held its twenty-first session from 17 March to 18 April 2008.[13] The plenary part of the session was held from 31 March to 11 April. The periods from 17 to 28 March and from 14 to 18 April were used for the technical examination of submissions at the GIS laboratories and other technical facilities of the Division, as scheduled (see General Assembly resolution 62/215, para. 49). Developments relating to the submissions under consideration by the Commission at its twenty-first session are presented below. Developments in the Meeting of States Parties relating to the Commission are presented in section II.C above. The outcome of the twenty-second session of the Commission, held from 11 August to 12 September 2008, will be presented in the report of the Secretary-General on oceans and the law of the sea to the sixty-fourth session of the General Assembly.

[13] For full details on the work of the Commission at its twenty-first session, see CLCS/58.

1. Consideration of the submission made by Australia

30. The Commission continued its consideration of the recommendations prepared by the Subcommission in detail. On 9 April 2008, the Commission adopted the "Recommendations of the Commission on the Limits of the Continental Shelf in regard to the submission made by Australia on 15 November 2004 on information on the proposed outer limits of its continental shelf beyond 200 nautical miles" by a formal vote of 14 to 3, with 1 abstention. Pursuant to article 6, paragraph 3, of annex II to UNCLOS, the recommendations were submitted in writing to the coastal State and to the Secretary-General of the United Nations.

2. Consideration of the submission made by New Zealand

31. On 3 April 2008, the Subcommission introduced to the Commission through a series of presentations its proposed text for the recommendations of the Commission in regard to the submission made by New Zealand. On the same day, at the request of the delegation of New Zealand, a meeting was held between that delegation and the Commission. The Commission decided to defer consideration of the recommendations to the twenty-second session, pursuant to rule 53 of the rules of procedure (CLCS/40/Rev.1).

3. Consideration of the joint submission made by France, Ireland, Spain and the United Kingdom of Great Britain and Northern Ireland

32. Following a request contained in a letter, dated 1 February 2008, the four delegations were invited to address the Commission in relation to the decision of the Commission regarding joint submissions reflected in paragraphs 27 and 28 of the statement by the Chairman on the progress of work at the twentieth session (CLCS/56). The Subcommission continued its examination of the joint submission and met with the four delegations and decided to hold further meetings during the twenty-second session.

4. Consideration of the submission made by Norway

33. Several meetings were held with the delegation of Norway, which made presentations to the Subcommission on certain areas of the submission and responded to questions posed by the Subcommission. The Subcommission informed the delegation about its preliminary views with regard to certain areas of the submission and about its future programme of work.

34. The Subcommission decided to hold further meetings during the twenty-second session.

5. Consideration of the submission made by France

35. After a preliminary analysis of the submission conducted by the members of the Subcommission during the intersessional period, the Subcommission met from 14 to 18 April 2008 to continue its analysis of the data and other materials contained in the submission made by France. The Subcommission will continue its work during the twenty-second session.

6. Submission made by Mexico

36. The Commission began the consideration of the partial submission made by Mexico in respect of the western polygon in the Gulf of Mexico. The submission was presented at the plenary meeting on 1 April 2008 by Joel Hernández García, Legal Counsel, Ministry of Foreign Affairs of Mexico; Mario Alberto Reyes Ibarra, Director-General of Geology, National Institute of Statistics, Geography and Technology; Mario Alberto Góngora Villareal, Director of Hydrography, Ministry of the Navy; and Rebeca Navarro Hernández, Expert Coordinator, Petróleos Mexicanos.

37. The Commission established a Subcommission for the consideration of the submission.[14] During the twenty-first session, the Subcommission met and elected Mr. Tamaki as its Chairman and Mr. Astiz and Mr. Pimentel as Vice-Chairmen. Further work will continue during the twenty-second session.

7. New submissions

38. Following the twenty-first session, the Commission received three new submissions: on 8 May 2008, from Barbados; on 9 May 2008 from the United Kingdom in regard to the continental shelf of Ascension Island; and on 16 June 2008, from Indonesia in regard to the continental shelf of North West of Sumatra Island.

39. In accordance with rule 50 of the rules of procedure of the Commission, the Secretary-General circulated Continental Shelf Notifications, containing the executive summaries of those submissions and all charts and coordinates indicating the proposed outer limits of the continental shelf and the relevant baselines, to all States Members of the United Nations, including States parties to UNCLOS. The executive summaries were made available on the website of the Division (see www.un.org/depts/los/clos_new/clcs_home.htm). The examination of the submissions of Barbados and of the United Kingdom has been included in the provisional agenda of the twenty-second session of the Commission. The examination of the submission of Indonesia will be scheduled in conformity with rule 51, paragraphs 4 bis and 4 ter, of the rules of procedure of the Commission (CLCS/40/Rev.1).

E. The Area: the work of the International Seabed Authority

40. One of the key conclusions reached at a recent technical workshop convened by the International Seabed Authority in February 2008, to develop a preliminary cost model for a deep seabed polymetallic nodule mining and processing venture, was that metal prices, particularly nickel prices, are a major factor in the profitability and attractiveness of investments in those ventures. Noting that there are no large land-based deposits of nickel sulphides remaining to be developed, the workshop emphasized that oxide ores (laterites and polymetallic nodules) are the future source of nickel to meet the demand (see ISBA/14/A/2).

[14] See CLCS/58, para. 38, for the composition of the Subcommission.

41. It has been reported that the private sector, in particular Nautilus Minerals Inc., is taking the lead in developing marine mineral resources in the Western Pacific and has announced a target date of 2010 for commercial production.[15]

42. The fourteenth session of the International Seabed Authority was held from 26 May to 6 June 2008. At that session, the Assembly of the Authority elected Nii Allotey Odunton as its next Secretary-General. Mr. Odunton, a national of Ghana, currently Deputy to the Secretary-General of the International Seabed Authority, will assume the office on 1 January 2009 for a term of four years.

43. The Assembly also approved the budget of the Authority for the 2009-2010 biennium for a sum of US$ 12,516,500.

44. The Council of the Authority continued its deliberations on the draft regulations on prospecting and exploration for polymetallic sulphides in the Area, as contained in ISBA/13/C/WP.1. It completed its review of the regulations that had been left pending at the end of the thirteenth session, as well as the review of informal texts of annexes 1 and 2 to the regulations and annex 4. The Council will continue its work on this subject at the next session.

45. Work on the draft regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area continued within the Legal and Technical Commission. During the fourteenth session, the Commission also considered the annual reports of the eight contractors, submitted pursuant to the Regulations on Prospecting and Exploration of Polymetallic Nodules in the Area. The Legal and Technical Commission noted the lack of raw data being provided by the contractors despite its repeated requests and the absence of uniformity in the classification of nodule types used by different contractors and suggested that contractors collaborate to standardize such classifications.

46. The Legal and Technical Commission also considered the applications for the training programme proposed by Germany pursuant to the contract for exploration for polymetallic nodules between the Authority and the German Federal Institute for Geosciences and Natural Resources. Four candidates from Egypt, Madagascar, Mali and Myanmar, and four alternates from Barbados, Chile, Madagascar and Mexico were selected for the training.

47. The Legal and Technical Commission also had before it two applications for approval of plans of work for exploration in reserved areas of the Authority from Nauru Ocean Resources Inc. (sponsored by Nauru) and by Tonga Offshore Mining Ltd. (sponsored by Tonga), respectively. Both applicants are incorporated subsidiaries of Nautilus Minerals Inc. The Commission is expected to continue its considerations of these applications.

48. At the next session, the Legal and Technical Commission will continue considering a proposal relating to the criteria for the establishment of preservation reference zones in the Clarion-Clipperton Zone (see para. 221 below). The fifteenth session of the International Seabed Authority is scheduled to be held in Kingston from 25 May to 5 June 2009.

[15] Statement by the Secretary-General of the International Seabed Authority at the sixty-second session of the General Assembly (A/62/PV.65).

IV. Developments relating to international shipping activities

49. The following chapter presents economic aspects of shipping and describes recent efforts by the international community to enhance maritime safety in relation to safety of ships, transport of dangerous goods, hydrographic surveying and nautical charting, routes used for international navigation, implementation and enforcement, safety investigations into marine casualties or marine incidents and the removal of wrecks. The role of the human element in promoting maritime safety and the rescue of persons at sea will be addressed in chapter V.

50. Maritime safety is of vital importance to international shipping activities as also recognized at the ninth meeting of the Consultative Process when maritime safety and security were considered in depth (see para. 289 below).

A. Economic aspects of shipping

51. According to a recent UNCTAD publication,[16] world seaborne trade (goods loaded) increased in 2006, reaching 7.4 billion tons. The world merchant fleet expanded to 1.04 billion deadweight tons (dwt) at the beginning of 2007, representing an 8.6-per cent increase over 2006, of which the highest growth was recorded for containerships. Total tonnage on order reached 6,908 vessels with a total tonnage of 302.7 million dwt. The estimated average age of the world fleet dropped marginally to 12 years in 2006. The oldest vessel type remains the general cargo vessel representing 56.8 per cent of all vessels more than 19 years old. It has an average age of 17.4 years. As regards fleet ownership, developing countries controlled about 31.2 per cent of the world dwt, developed countries about 65.9 per cent and economies in transition the remaining 2.9 per cent at the beginning of 2007. Between January 2006 and 2007, the foreign-flagged share for the first time since 1989 slightly decreased from 66.5 per cent to 66.3 per cent of the world total. The 10 major open and international registries[17] account for 53.7 per cent of the world fleet. Of the remaining tonnage, 27.7 per cent is registered in developing countries, 18.9 per cent is registered in developed countries and 1.3 per cent in countries in transition.

B. Safety of navigation

1. Safety of ships

52. At its eighty-fourth session in May 2008, the Maritime Safety Committee adopted a number of amendments to SOLAS to enhance ships' safety and survivability (resolution MSC.256(84)). The amendments are expected to enter into force on 1 January 2010. Amendments were also adopted to the following instruments: the 1988 SOLAS Protocol (resolution MSC.258(84)); the 1994 and 2000 International Codes of Safety for High Speed Craft (resolutions MSC.259(84) and MSC.260(84)); and the Guidelines on the enhanced programme of inspections

[16] UNCTAD, *Review of Maritime Transport, 2007* (United Nations publication, Sales No. E.07.II.D.14).

[17] The 10 major open and international registries are Antigua and Barbuda, Bahamas, Bermuda, Cyprus, the Isle of Man, Liberia, Malta, the Marshall Islands, Panama and Saint Vincent and the Grenadines.

during surveys of bulk carriers and oil tankers (resolution A.744(18)) (see resolution MSC.261(84)). A revised Code of Safety for Special Purpose Ships was also adopted (resolution MSC.266(84)).

53. The work regarding goal-based standards for new ship construction (see A/60/63, para. 60; A/63/63, para. 172; see also www.imo.org) has also progressed. A workplan was agreed on by the MSC with a view to finalizing and approving Tiers I to III of the goal-based standards for bulk carriers and oil tankers and the associated SOLAS amendments at its eighty-fifth session (26 November to 5 December 2008) and finalizing generic guidelines developing goal-based standards at the eighty-sixth session of the MSC, in 2009. The workplan also includes a long-term plan on the application of the goal-based standards (MSC 84/24, para. 5.20).

54. *Fishing vessels*. MSC agreed to include a high-priority item on "Development of an agreement on the implementation of the 1993 Torremolinos Protocol" in the work programme of the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF) (ibid., paras. 22.60-22.62). The Sub-Committee on Flag State Implementation (FSI), at its sixteenth session, in June 2008, also urged States to consider acceding to the 1993 Torremolinos Protocol to the International Convention for the Safety of Fishing Vessels and the International Convention on Standards of Training Certification and Watchkeeping for Fishing Vessel Personnel, 1995 at their earliest convenience, and to contribute actively to the work of the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety and the implementation of IMO Assembly resolution A.1003(25), with a view to identifying the revisions to the 1993 Torremolinos Protocol which may be needed to make the Protocol acceptable to ensure its early entry into force.[18]

55. The Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety has agreed to a target date of 2010 for the submission to MSC for approval of the final draft safety recommendations for decked fishing vessels of less than 12 metres in length and undecked fishing vessels.[19] The draft safety recommendations have been referred to relevant subcommittees and member Governments for their consideration (see also para. 84 below).

2. Transport of dangerous goods

56. At the eighty-fourth session of MSC, amendments to the International Maritime Dangerous Goods Code were adopted (resolution MSC.262(84)). The amendments are expected to enter into force on 1 January 2010, but may be applied in whole or in part voluntarily one year earlier.

57. In resolution A.984(24), the Secretary-General of IMO was requested to explore the possibility of the establishment of an ad hoc mechanism within the IMO secretariat for the resolution of difficulties in the carriage of dangerous goods, under the Code, including class 7 radioactive materials in cooperation with IAEA. The Secretary-General established a focal point in that regard. IMO has also established a Dangerous Goods Carriage Database where access to relevant reports on delay and denials are provided. As of 4 March 2008, 18 reports on delays and denials of class 7 radioactive materials in sea mode had been received. Subject to a joint

[18] Report of the sixteenth session of FSI, document 16/18, paras. 13.4 and 13.9.

[19] For the reports of the fiftieth and fifty-first sessions of the Sub-Committee, see SLF 50/19 and SLF 51/WP.5. The draft safety recommendations are contained in SLF 51/5.

analysis to be conducted by IMO, IAEA and the International Civil Aviation Organization, the majority of the reports contained therein concern carriers and port authorities' refusal to accept class 7 radioactive materials as required by their existing policy, while a small number of radioactive materials were accepted only for certain destinations. MSC agreed that it should be kept informed of the outcome of the ad hoc mechanism and urged member States to take actions to facilitate the shipment of all dangerous goods, in particular, the class 7 radioactive materials, for humanitarian purposes (see MSC 84/24, paras. 8.26-8.29).

58. Data reported to IAEA between September 2007 and March 2008 indicates that more delays than denials were taking place. Out of 69 reports, 23 concerned sea, rail and road transport. Delays can virtually render a radioisotope useless because of its short radioactive half-life.[20] In response to the increasing number of instances of radioactive material being denied shipment by carriers, IAEA convened a number of regional workshops on denials of shipment in Italy in May 2008 and in China, Madagascar and the United Republic of Tanzania in June 2008. These workshops resulted in the development of regional action plans and networks to address key issues. The IAEA International Steering Committee, at its third meeting, in January 2008, concluded that regional networks were an important step towards solving problems of denials of shipment and stressed the importance of establishing regional networks.[21]

59. Issues relating to the transport of radioactive materials will also, inter alia, be considered by the twelfth International Congress of the International Radiation Protection Association in October 2008. The transport of radioactive materials was also discussed at the ninth meeting of the Consultative Process (A/63/174 and Corr.1). Recent developments regarding work on nuclear liability within IAEA are presented in paragraphs 216-217 below.

60. A group of several shipping and coastal States concerned with ensuring the safety of maritime transport have been holding informal discussions, with IAEA assistance, with a view to maintaining dialogue and consultation aimed at enhancing mutual understanding, building confidence and improving communication in relation to safe maritime transport of radioactive material. At the third round of informal discussions, in September 2007, a draft outline of a document (being developed jointly by a shipping State and a coastal State) relating to how a State could respond to a maritime emergency near its territory was presented. In March 2008, a further meeting took place between a coastal State, a shipping State and IAEA to explore the potential for ensuring that essential information on packages used in transport was readily available to any State requiring it.[22]

3. Hydrographic surveying and nautical charting

61. The IMO Sub-Committee on Safety of Navigation (NAV), at its fifty-fourth session held from 30 June to 4 July 2008, finalized the proposed new regulations under SOLAS on the carriage requirements for shipborne navigational systems and

[20] "Experts Tackle Shipment Issues for Beneficial Radiation Sources", at http://www.iaea.org/NewsCenter/News/2008/shipmentissues.html.

[21] Measures to strengthen international cooperation in nuclear, radiation and transport safety and waste management, IAEA document GC(52)/2, para. 144.

[22] Ibid., para. 145.

equipment.[23] NAV also agreed on an amendment to existing regulation V/19.2.1.4 to provide that the Electronic Chart Display and Information System is an acceptable alternative to nautical charts and nautical publications.[24] Understanding the need for proper training for the successful transition to the Electronic Chart Display and Information System, a SN/Circular was drafted providing guidance on transitioning from paper chart to Electronic Chart Display and Information System navigation.[25] MSC will consider the proposals at its eighty-fifth session.

62. IHO conducted a survey of commercially offered electronic nautical charts in January 2008 and found that there was a significant availability, which had increased notably, with trading routes and ports, and vulnerable and complex areas already comprehensively covered (NAV 54/14/5, paras. 5 and 7.1). It was concluded that electronic nautical charts would cover the world's major trading routes and ports by 2010 and that in a number of key shipping areas new bathymetric information would create electronic nautical charts significantly better than existing paper charts (ibid., paras. 7.3 and 12). The online catalogue of available official charts will be accessible on the IHO website from 1 September 2008 (NAV 54/14/6, para. 10).

4. Routes used for international navigation

63. *Ships routeing and reporting systems*. At its fifty-fourth session, NAV approved amendments to the General Provisions on Ships' Routeing for submission to MSC for approval at its eighty-fifth session, subject to confirmation by the IMO Assembly. The proposed amendments are intended to align the aforementioned provisions with the specifications for routeing measures boundary symbology and charting of archipelagic sea lanes adopted by IHO (NAV 54/WP.7, paras. 5.1-5.6). NAV also approved several traffic separation schemes,[26] routeing measures other than traffic separation schemes[27] and mandatory ship reporting systems[28] for submission to MSC at its next session with a view to their adoption (NAV 54/WP.7, paras. 3.25-3.44).

64. NAV discussed the increasing number of mandatory ship reporting systems and whether automatic identification systems and LRIT could be used to satisfy the reporting requirements in such systems. It noted that there was a significant increase in ship traffic and size of ships and that automatic identification systems and LRIT could not in all instances replace the manual reporting in ship reporting systems.

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[23] Draft report of the 54th session of NAV, NAV 54/WP.7, para. 14.31. The regulations are contained in NAV 54/WP.8, annex 1.

[24] Ibid., para. 14.26.

[25] Ibid., para. 14.30. The draft Circular is contained in NAV 54/WP.8, annex 3.

[26] The new traffic separation schemes were proposed by Greece; Finland and Sweden; the United Kingdom; and amendments were proposed by Denmark, the United Kingdom and the United States.

[27] The routeing measures other than traffic separation schemes include: a new area to be avoided proposed by the United Kingdom; a new recommendatory seasonal area to be avoided to reduce the likelihood of ship strikes and deaths and serious injuries to North Atlantic right whales; and a new area to be avoided and two mandatory no anchoring areas which were proposed by the United States; and new deep-water routes and a new two-way route which were proposed by Finland and Sweden.

[28] A new mandatory ship reporting system was proposed by Portugal; and amendments to the existing ship reporting system for the Papahānaumokuākea Marine National Monument was proposed by the United States.

Manual reporting might have benefits for instance when the mariner has to take affirmative action to report. NAV agreed that any review of mandatory ship reporting systems should be carried out in the context of SOLAS chapter V, regulation 11, and it was premature for NAV to do a full-scale review of all mandatory reporting systems as automatic identification systems and LRIT were still under development. NAV also agreed that member Governments should review any existing system to determine whether such system could be amended to take into account the technological developments when they were considering the submission of a new reporting system (ibid., paras. 3.46-3.48).

65. Work has continued within IMO to implement LRIT. At its eighty-fourth session, MSC undertook a number of actions to facilitate its smooth implementation. It revised a number of performance standards and functional requirements (resolution MSC.263(84)). It also approved its circulars regarding Guidance on the survey and certification of compliance of ships with the requirement to transmit LRIT information, Guidance on search and rescue services in relation to requesting and receiving LRIT information, Guidance on the implementation of the LRIT system, and Interim revised technical specifications for the LRIT system.[29] MSC also adopted a resolution confirming that the United States will temporarily provide the International LRIT Data Exchange at its own cost and that a permanent solution should be found as soon as possible (resolution MSC.264(84)). MSC endorsed a "user pays" financial model and agreed that search and rescue services are entitled to receive free of charge LRIT information[30] (MSC.1/Circ 1258 and resolution MSC.263(84); see also para. 25 above).

66. *Straits used for international navigation.* The States bordering the Straits of Malacca and Singapore (the Straits) continued to make efforts to enhance safety, security and environmental protection in the Straits. Progress was made on the Cooperative Mechanism composed of a Cooperation Forum, a Project Coordination Committee and an Aids to Navigation Fund. The first Aids to Navigation Fund Committee met in April 2008. A number of user States and other stakeholders provided substantial contributions to the Fund. The first Cooperation Forum, held in May 2008, served as an avenue for States bordering the Straits, user States and other stakeholders to discuss and exchange views on issues in relation to safety of navigation and environmental protection in the Straits.[31]

67. One of the six projects first presented at the meeting in Kuala Lumpur in September 2006,[32] namely a demonstration project to trial, test and assess automatic identification systems class B transponders and the interaction between class A and B transponders is currently being conducted in the Straits by the three States bordering the Straits with support from some other countries for the purpose of improving the safety, security and environmental protection in this area (MSC 84/24, para. 4.5).

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[29] MSC.1/Circ 1257, MSC.1/Circ 1258, MSC.1/Circ 1256, MSC.1/Circ 1259, respectively.

[30] MSC 84/24, paras, 6.1-6.138; see also A/60/63/Add.2, paras. 46-47; A/61/63/Add.1, paras. 67-70; A/63/63, paras. 66 and 191.

[31] Presentation made by Mr. Arif Havas Oegroseno at the ninth meeting of the Consultative Process, at http://www.un.org/depts/los/consultative_process/9thmeetingpanel.htm.

[32] Revised versions of those projects were provided by the States bordering the Straits during the Singapore meeting in September 2007, see IMO/SGP 1/3.

68. At the ninth meeting of the Consultative Process, some States expressed their appreciation to the States' participation in the Cooperative Mechanism and encouraged further progress in this regard, including more contributions to the Aids to Navigation Fund (see A/63/174 and Corr.1, para. 82).

69. An IMO Malacca and Singapore Straits Trust Fund (IMO Fund) was established by the Secretary-General of IMO as a complementary mechanism to the Cooperative Mechanism, aimed at enhancing safety, security and environmental protection in the Straits. Contributions to the IMO Fund are voluntary and may, inter alia, originate from States, intergovernmental and non-governmental organizations, industry and private benefactors. A memorandum of understanding (MOU) is under preparation between the States bordering the Straits and IMO to ensure that the initiative for the mobilization of resources for the implementation of the relevant projects on aids to navigation would be left to the States bordering the Straits, with IMO's support, as feasible and within the financial limitations of the IMO Fund (C/100/7/Add.1, paras. 3 and 4 and annex).

C. Implementation and enforcement

70. At its sixteenth session, FSI considered the first Consolidated Audit Summary Report (A 25/8/2) of eight of the audits conducted in 2006 and 2007 as part of the Voluntary IMO Member State Audit Scheme. The findings provided valuable lessons on the enforcement and implementation of the 10 mandatory IMO instruments covered by the Audit Scheme. In general, the audits found that the States had substantially met their obligations under the various mandatory instruments, but also identified areas where States had either fallen short or had encountered difficulties (FSI 16/18, paras. 14.25-14.27).

71. FSI is conducting a review of the Consolidated Audit Summary Report, which involves developing a methodology for the analysis of consolidated audit summary reports in order to provide feedback of recurrent areas of findings, including the identification of possible underlying causes and best practices; provide feedback on the effectiveness of the implementation of these mandatory instruments; and identify areas where specific technical cooperation activities would benefit States (ibid., paras. 14.28-14.35).

72. At its hundredth session in June 2008, the IMO Council noted that 21 audits had already been completed under the Audit Scheme, another 21 countries had offered to be audited, and eight additional audits were planned for 2008 (C/100/D, para. 6.2). It requested the IMO Secretary-General to prepare a holistic study of possible ways to develop the Audit Scheme (ibid.).

73. With regard to the International Safety Management Code, MSC, at its eighty-fourth session, approved draft amendments to the Code to harmonize the requirement for the extension of the validity of the Safety Management Certificate with those of SOLAS certificates and the International Ship Security Certificate (MSC 84/24, paras. 15.11-15.13, 15.30-15.31, and MSC 84/24/Add.2, annex 20). It also prepared a preliminary draft text of amendments to the Revised Guidelines on Implementation of the International Safety Management Code by Administrations (MSC 84/24, paras. 15.14-15.16, and 15.32-15.36).

74. Recent developments regarding port State control include the continued work by FSI on the harmonization of port State control activities. FSI is, inter alia, proceeding with the finalization of data exchange protocols with the secretariats of port State control regimes for the provision of all port State control inspection data (FSI 16/18, paras. 7.38-7.45).

D. Maritime casualties

75. At its eighty-fourth session, MSC adopted the Code of the International Standards and Recommended Practices for a Safety Investigation into a Marine Casualty or Marine Incident (resolution MSC.255(84)). SOLAS chapter XI-1 was accordingly amended, to make parts I and II of the Code mandatory.[33] Part III of the Code contains related guidance and explanatory material. The objective of the Code is to provide a common approach for States to adopt in the conduct of marine safety investigations into marine casualties and marine incidents (see A/63/63, para. 204). The amendment to SOLAS is expected to enter into force on 1 January 2010 (MSC 84/24, paras. 3.60-3.65).

76. Work on casualty analysis, including identifying ways to improve the current casualty analysis procedure, continued within FSI. At its sixteenth session, FSI agreed on a study on the feasibility of combining casualty data and port State control data, including studying whether a correlation might be established between casualty statistics and port State control outcomes (FSI 16/18, paras. 6.1-6.39 and 3.8-3.15). In addition, it developed revised reporting formats on marine casualties and incidents for approval by the Marine Environment Protection Committee (MEPC) and MSC (FSI 16/18, para. 6.16 and annex 1).

77. At its eighty-fourth session, MSC approved a draft circular on guidance on near-miss reporting that encouraged reporting of near-misses to avoid recurrences and gave guidance on the implementation of near-miss reporting, subject to a concurrent decision of MEPC at its fifty-eighth session in October 2008 (MSC 84/24, paras. 15.19-15.23 and 15.39).

E. Wreck removal

78. Although the incidence of marine casualties has decreased in recent years, the number of abandoned wrecks, estimated at almost 1,300 worldwide, has reportedly increased (see http://www.imo.org/home.asp). The Nairobi International Convention on the Removal of Wrecks, 2007, attempts to address the problems caused by wrecks to coastal States and shipping in general (see A/62/66/Add.1, paras. 74-76). It will be open for signature until 18 November 2008, and will enter into force 12 months following the date on which 10 States have either signed it without reservation as to ratification, acceptance or approval or have deposited instruments of ratification, acceptance, approval or accession with the Secretary-General of IMO. On 28 March 2008, Estonia became the first country to sign the Nairobi Convention.[34]

[33] Resolution MSC.257(84), a new SOLAS regulation XI-1/6 was added.

[34] IMO News Briefing 28 March 2008, at http://www.imo.org/home.asp.

79. The International Association of Ports and Harbors, at its annual meeting in April 2008, unanimously adopted a resolution on accelerating the ratification process of certain IMO instruments, including the Nairobi Convention. The resolution, inter alia, urged States to ensure, as a matter of priority, the ratification of the Nairobi Convention and to consider extending its application to wrecks located in their territorial waters.[35]

V. People at sea

80. There was considerable discussion of the topic of people at sea during the ninth meeting of the Consultative Process (A/63/174 and Corr.1, paras. 6-7 and 87-109). It was emphasized that the human element played a critical role in creating a safe and secure marine environment, and in turn it was recognized that ensuring decent living and working conditions for, and fair treatment of, seafarers and fishers was an important aspect of facilitating this role. With regard to international migration by sea, it was recalled that the duty to render assistance to persons in distress at sea was a fundamental obligation under international law. The need for all aspects of clandestine migration to be addressed in an integrated and comprehensive manner, on the basis of international cooperation, was also emphasized.

A. Seafarers and fishers

1. Seafarers

81. The Maritime Safety Committee, at its eighty-fourth session, noted the progress of work relating to the comprehensive review of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers and the Standards of Training, Certification and Watchkeeping for Seafarers Code, and agreed to invite the IMO Council to endorse, in principle, the holding of a Diplomatic Conference in 2010 to adopt amendments emanating from the comprehensive review (MSC 84/24, paras. 12.2-12.3).

82. With regard to the Maritime Labour Convention, 2006, ILO has convened tripartite expert meetings in September 2008 to adopt, respectively, guidelines on flag State responsibilities under the Convention and guidelines on port State responsibilities for the inspection of labour conditions on board ships under the Convention. ILO has prepared proposals for both guidelines for these meetings.[36]

83. Following on from the agreement during its seventh session[37] to move to a mandatory long-term solution on the issue of abandonment, the Joint IMO/ILO Ad Hoc Expert Working Group on Liability and Compensation regarding Claims for Death, Personal Injury and Abandonment of Seafarers, during its eighth session in July 2008, committed itself to a mandatory long-term solution concerning claims for death and personal injury of seafarers. There was also extensive discussion of the principles and elements of the proposed instruments. The Working Group agreed on

[35] IAPH Media Release 28 April 2008, at http://www.iaphworldports.org/newsletter/PR-DunkirkResolutionIMOConventions.pdf.

[36] The proposals are available at www.ilo.org/global/What_we_do/InternationalLabourStandards/MaritimeLabourConvention/lang--en/index.htm.

[37] Report of the seventh session of the Working Group held in February 2008, LEG 94/5.

the need for a clearer mandate for its future work and approved new draft terms of reference for consideration by the IMO Legal Committee and the ILO Governing Body.[38]

2. Fishers

84. FAO has described the fishing profession as probably the most dangerous occupation in the world. The number of fishers worldwide is estimated around 30 million, and the fatality rate is estimated to be at least 24,000 fishers a year (see A/63/174 and Corr.1, para. 88; see also A/63/63, para. 174). The legal and policy framework for the safety of fishing vessels and fishers continues to be the focus of attention and work is ongoing to strengthen and further develop the framework. At its eighty-third session, MSC agreed to expand the existing work programme of the Stability and Load Lines and on Fishing Vessels Safety Sub-Committee to enable it to develop practical guidelines to assist competent authorities in implementing the revised Code of Safety for Fishermen and Fishing Vessels, 2005, the Voluntary Guidelines for the Design, Construction and Equipment of Small Fishing Vessels, 2005, and the safety recommendations for decked fishing vessels of less than 12 metres in length and undecked fishing vessels once they have been approved by MSC (see MSC 83/28, para. 25.53; see also paras. 54 and 55 above).

B. International migration of people by sea

85. Significant numbers of people continue to use maritime routes to clandestinely migrate to other countries, often at great risk to their lives. There are reports of incidents of deaths of people at sea in various regions of the world. For example, in June 2008, it was reported that nearly 30 Somalis had died in the Mediterranean Sea between the Libyan Arab Jamahiriya and Italy after the boat in which they were travelling en route to Italy capsized.[39] In July 2008, at least six people were feared to have drowned off the island of Mayotte in the Comoros in the Indian Ocean. The boat, which capsized, was carrying Comorans who were attempting to migrate to Mayotte.[40] In July 2008, over 20 Haitians attempting to migrate to the Bahamas were reported to have drowned.[41]

86. UNHCR and the Mixed Migration Task Force for Somalia organized a two-day Regional Conference on Refugee Protection and International Migration, in Yemen in May 2008, to examine the challenges of protecting refugees in mixed migratory flows. The aim of the Conference was to establish a regional mechanism and a longer-term plan of action on refugee protection and mixed migration in the Gulf of Aden region.[42]

87. Within IMO, MSC, at its eighty-fourth session, considered a proposal submitted by Italy and Spain to include in the work programme of FSI, the examination of the situation facing the crews of ships that rescue persons at sea, with the aim of finding a satisfactory solution for the ships and providing adequate

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[38] Report of the eighth session (LEG 94/5/1).

[39] BBC alert, 7 June 2008. Source: Radio HornAfrik, Mogadishu, Somalia.

[40] BBC alert, 23 July 2008. Source: Radio France Internationale, Paris.

[41] BBC alert, 1 August 2008. Source: Caribbean Media Corporation, Bridgetown.

[42] For the conference report, including recommendations, and other documents, see http://www.unhcr.org/protect/48722c992.html.

arrangements for those rescued at sea to ensure that they are disembarked at a safe place within a reasonable time. The Committee noted that the Facilitation Committee had established a correspondence group to address issues related to the disembarkation of persons rescued at sea, and that these issues would be addressed at the thirty-fifth session of the Facilitation Committee in January 2009. Noting also the expertise of the Sub-Committee on Radiocommunications and Search and Rescue in matters relating to safety of persons at sea, MSC agreed to include a high priority item on "Measures to protect the safety of persons rescued at sea" in the work programmes of the Sub-Committee and FSI with a target completion date of 2010.[43]

88. International migration by sea also needs to be considered in the broader context of international migration. In this connection, it can be noted that the second meeting of the Global Forum on Migration and Development on "Protecting and empowering migrants for development" will be held in Manila in October 2008 (see General Assembly resolution 62/270). The themes of the three round-table discussions at the meeting are as follows: "Migration, development and human rights"; "Secure, legal migration can achieve stronger development impacts"; and "Policy and institutional coherence and partnerships".

89. In recognition of the need to consider issues relating to international migration from a broader perspective and to strengthen international cooperation and coordination, representatives of relevant international organizations held the fourth inter-agency meeting on the treatment of persons rescued at sea on 23 June 2008 at United Nations Headquarters to coincide with the ninth meeting of the Consultative Process. The meeting discussed recent developments in international forums, challenges relating to the treatment of persons rescued at sea and enhancing inter-agency cooperation.

VI. Maritime security

90. The importance of enhancing cooperation and coordination at all levels in combating threats to maritime security was highlighted at the ninth meeting of the Consultative Process, which focused on the topic "Maritime security and safety" (see para. 289 below).

91. At the regional level, cooperative initiatives and integrated approaches designed to address multiple threats to maritime security can assist in the implementation of relevant international instruments dealing with maritime security, while diminishing some of the associated costs. A number of regional initiatives of this nature have recently been undertaken as illustrated by the following examples. In July 2008, the countries of the Caribbean Community concluded the Maritime and Airspace Security Cooperation Agreement (see www.caricomlaw.org/doc.php?id=2547), which sets up a comprehensive framework for cooperation in combating various threats to maritime and aviation security between relevant governmental agencies of participating States parties, and also concluded the Arrest Warrant Treaty.[44]

[43] MSC 84/22/9 (submitted by Spain and Italy); and MSC 84/24, paras. 22.19-22.25.

[44] Communiqué issued at the conclusion of the 29th Meeting of the Conference of Heads of Government of the Caribbean Community, July 2008, Bolans, Antigua and Barbuda, at www.caricom.org/jsp/communications/communiques/29hgc_2008_communique.jsp.

92. On 15 February 2008, the Indian Ocean littoral States established the Indian Ocean Naval Symposium to serve as a consultative forum within which the navies and other national agencies responsible for maritime security can discuss issues and concerns that bear upon maritime security, with a view to arriving at agreed courses of action on transnational issues, based upon a common understanding of the regional maritime security environment (see http://indiannavy.nic.in/ion.htm). At a meeting held in May 2008, the South Asia Regional Port Security Cooperative was launched to bring together nine States from the region[45] to combat various threats to maritime security. In July 2008, the Regional Forum of the Association of Southeast Asian Nations (ASEAN) established the Intersessional Meeting on Maritime Security, which will provide an annual platform for discussion of maritime security issues.[46] In the Joint Declaration of the Paris Summit for the Mediterranean, adopted on 13 July 2008 at the Euro-Mediterranean Heads of States and Government meeting, participants recognized the need to devote particular attention to cooperation in the field of maritime security and safety.[47] Specific projects will be decided by the next Foreign Affairs Ministerial meeting in November 2008. At the meeting in July, a briefing paper suggested the creation of a fund for public-private financing of maritime security in the Mediterranean and suggested introducing a levy on ships passing through, inter alia, the Strait of Gibraltar and the "Bosphorus".[48]

A. Terrorist acts against shipping and offshore installations

93. The Counter-Terrorism Committee Executive Directorate recently prepared a global survey of the implementation of Security Council resolution 1373 (2001), in which it drew conclusions about global progress in the implementation of the resolution in key thematic areas and made priority recommendations for future action by the Committee. With regard to border control, the Committee recommended to: (a) promote the implementation of international standards for customs, aviation and maritime security; (b) encourage the adoption of best practices in border control where such practices have proven their effectiveness, as in the fields of travel document security, traveller screening and cargo security; (c) enhance coordination among police and border control agencies; (d) encourage States to gain and provide better access to international counter-terrorism and criminal databases in order to enhance abilities to detect and exclude persons involved in terrorism (see S/2008/379, para. 152).

94. IMO is currently considering the development of guidance on port facility security audits and the development of model legislation on maritime security (MSC 84/24, paras. 4.7-4.10). MSC also took several important decisions, at its eighty-fourth session, regarding the setting up of LRIT (see paras. 25 and 65 above).

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[45] Bangladesh, Comoros, India, Madagascar, the Maldives, Mauritius, Oman, Pakistan and Sri Lanka. The meeting was held from 19 to 22 May 2008. See http://www.51voa.com/VOA_Standard_English/VOA_Standard_English_21487.html.

[46] ASEAN Regional Forum Chairman's Statement, 15th Meeting, 24 July 2008, para. 30, at www.aseanregionalforum.org/Home/tabid/36/Default.aspx.

[47] "Joint Declaration of the Paris Summit for the Mediterranean", at http://www.ue2008.fr/PFUE/lang/en/accueil/PFUE-07_2008/PFUE-13.07.2008/declaration_commune_du_sommet_de_paris_pour_la_mediterranee.

[48] "Press Kit" regarding the Union for the Mediterranean, at http://www.ue2008.fr/PFUE/lang/fr/accueil/PFUE-07_2008/PFUE-13.07.2008/sommet_de_paris_pour_la_mediterranee_4758.

B. Piracy and armed robbery against ships

95. The number of committed and attempted acts of piracy and armed robbery against ships reported to IMO during the first six months of 2008 totalled 121. The areas affected were the South China Sea (34 incidents), East Africa (34), West Africa (25), the Indian Ocean (17), South America (7), the Malacca Straits (2), the Arabian Sea (1), and the Mediterranean (1).[49] Hijacking of ships and violence against crew members continue to be worrying trends. During this period, 12 hijackings and 238 instances of violence against crew members were reported to the International Maritime Bureau of the International Chamber of Commerce, equalling the number from the first six months of 2007. Some 190 crew members were taken hostage, 6 kidnapped, 7 killed and 7 missing and presumed dead.[50]

96. IMO has begun to undertake a comprehensive review of the guidance it provides for preventing and suppressing piracy and armed robbery against ships to, inter alia, take into account the current trends and practices of perpetrators, provide advice in cases where seafarers, fishermen and other mariners are kidnapped or held hostage for ransom, and provide advice in cases where naval vessels and military aircraft seek to provide assistance or protection. IMO established a correspondence group, which will submit a preliminary report to the MSC at its eighty-fifth session and a final report to its eighty-sixth session.

97. The number of acts of piracy and armed robbery against ships off the coast of Somalia remains a significant concern for the international community. Pirates have been reported to fire automatic weapons and rocket propelled grenades against victim vessels, using small boats accompanied by larger "mother ships" to attack ships far from the coast.[50]

98. As regards the situation in Somalia, the Security Council determined that the incidents of piracy and armed robbery against vessels in the territorial waters of Somalia and the high seas off the coast of Somalia exacerbate the situation in Somalia, which continues to constitute a threat to international peace and security in the region.[51] The Security Council adopted resolution 1816 (2008) of 2 June 2008, acting under Chapter VII of the Charter of the United Nations.

99. The IMO Council, at its 100th meeting, inter alia, invited member Governments, individually and/or collectively, to take appropriate action in accordance with relevant United Nations Security Council resolutions and, in particular, resolution 1816 (2008).[52]

100. In order to strengthen cooperation among States in the repression of piracy and armed robbery against ships in the Western Indian Ocean, the Gulf of Aden and the Red Sea, a draft MOU was developed during a two-stage subregional meeting, held

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[49] Monthly reports on acts of piracy and armed robbery against ships issued by the IMO secretariat, see MSC.4/Circs.116, 117, 118, 119, 120 and 122.

[50] International Chamber of Commerce International Maritime Bureau: Annual report of incidents of piracy and armed robbery against ships (1 January-30 June 2008).

[51] Similar concerns were also, inter alia, raised in the identical letters dated 8 May 2008 from the Permanent Representatives of Canada, Denmark, Greece, Japan, the Netherlands, Norway, the Republic of Korea and Spain to the United Nations addressed to the Secretary-General, the President of the General Assembly and the President of the Security Council (A/62/841-S/2008/310).

[52] See summary of decisions of the IMO Council, C/100/D, para. 7.2.

in the United Republic of Tanzania in April 2008, under the auspices of IMO (MSC 84/24, paras. 17.8-17.10). The draft MOU has been forwarded to national authorities in the subregion, as well as to the IMO Council, which at its 100th meeting "requested the Secretary-General [of IMO] to take appropriate action to promote the aforementioned MOU, including convening a high-level meeting to conclude it at the earliest possible time" (C/100/D, para. 7.2).

101. The MOU on the establishment of an IMO/Maritime Organization of West and Central Africa Subregional Coast Guard Network for the West and Central African subregion was adopted at the thirteenth General Assembly of Ministers of the Maritime Organization of West and Central Africa, on 30 July 2008.[53] Eleven of the twenty coastal member States, Cameroon, Cape Verde, the Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Gabon, Guinea, Guinea-Bissau, Nigeria, Senegal and Togo, have already signed the MOU. The Subregional Coast Guard Network is expected to provide the member States with an effective response mechanism against acts of piracy and armed robbery against ships and other unlawful acts, illegal, unreported and unregulated fishing (IUU fishing), illicit trafficking in drugs and weapons, illegal migration, oil theft, damage to gas pipelines and also enable them to respond to maritime accidents (see http://www.mowca.org/new%20design/general-assembly.html).

C. Illicit traffic in narcotic drugs and psychotropic substances

102. Illicit traffic in narcotic drugs and psychotropic substances by sea remains a significant threat to maritime security, since drug traffickers continue to make extensive use of the maritime route to transport such drugs and substances, including by using go-fast ships.[54] The particular vulnerability of transit States for illicit traffic in narcotic drugs was recently noted by the Commission on Narcotic Drugs.[55] Trafficking in drugs has been linked to organized criminal activities such as the trafficking in illicit firearms and terrorism.[56] In order to address this phenomenon, Turkmenistan, in collaboration with the United Nations Office on Drugs and Crime, hosted an international meeting to combat illicit drug trafficking through seaports in June 2008, with the participation of five States bordering the Caspian Sea, the World Customs Organization, the International Organization for Migration (IOM), the Organization for Security and Cooperation in Europe, the Central Asia Regional Information and Coordination Centre and UNEP (see http://turkmenistan.gov.tm/_eng/2008/06/25/concerting_efforts_for_global_security.html).

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[53] See www.mowca.org and IMO Press Briefing No. 39, 12 August 2008 at www.imo.org.

[54] *World Drugs Report, 2008* (United Nations publication, Sales No. E.08.XI.1), pp. 76 and 77, available from www.unodc.org/documents/wdr/WDR_2008/WDR_2008_eng_web.pdf.

[55] See *Official Records of the Economic and Social Council, 2008, Supplement No. 8* (E/2008/28), chap. II C, resolution 51/7, on assistance to States affected by the transit of illicit drugs.

[56] Ibid., resolution 51/11 on links between illicit drug trafficking and illicit firearms trafficking; and Security Council resolution 1817 (2008) ("Noting with concern the existing links between international security, terrorism and transnational organized crime, money-laundering, trafficking in illicit drugs and illegal arms ...").

VII. Marine science and technology

A. Marine science

103. Some of the new developments described below reflect the continuous efforts of the international community, since the last reporting period, to develop marine science and technology in order to improve the human understanding of the changes and processes in the marine environment, and also to further regulate some of the activities associated therewith.

104. *Guidelines regarding the deployment of floats in the high seas within the framework of the Argo Programme.* As of January 2008, the Argo Programme comprises a global array of 3,000 free-drifting floats in operation. While this coverage only constitutes 58 per cent of the target for open-ocean observing systems planned for completion by 2012, the array covers the world's oceans and continuously collects data on temperature, salinity and velocity within the upper 2,000 metres of the water column. The data are relayed and made publicly available within hours of collection (see www.argo.net). Argo contributes to the operational ocean observing system of the Global Ocean Observation System and also to the Climate Variability and Predictability Programme. It is estimated that 15 to 20 States are members of the Argo Programme.

105. The legal framework within the context of UNCLOS which is applicable for the collection of oceanographic data by different means, including by profiling floats, such as Argo, has been under consideration in IOC of UNESCO (see A/62/66, paras. 95-96). Guidelines for the implementation of resolution XX-6 of the IOC Assembly regarding the deployment of profiling floats in the high seas within the framework of the Argo Programme were adopted by the IOC Executive Council at its forty-first session (resolution EC-XLI.4, annex), following the review of the draft guidelines by the Advisory Body of Experts on the Law of the Sea.[57] The IOC Executive Council also requested the IOC Executive Secretary to develop practical and routine procedures to implement the Guidelines, in close cooperation with the Argo scientific team. The Guidelines provide for the possibility for an IOC member State to express its wish to be notified of the deployment of all Argo Programme floats that may enter its EEZ. Such notification would be transmitted to the Argo focal point of the IOC member State by the Argo Programme float implementer. If expressly agreed, the Argo Information Centre can undertake the notification on behalf of the implementer. Data obtained by the Argo Programme floats in the EEZ would be made freely available to all States, except where such data is of direct significance for the exploration and exploitation of natural resources, whether living or non-living, and a formal request for non-distribution has been made.

106. *Code of Conduct for Marine Scientific Research Vessels.* At its twenty-first meeting, in October 2007, the International Research Ship Operators' Meeting adopted a Code of Conduct for Marine Scientific Research Vessels. The Code recommends, inter alia, that every vessel conducting marine science should develop a marine environmental management plan and should be operated in compliance with the International Safety Management Code. As stated in its conclusion, all anthropogenic activities have potential environmental impacts and the objective of

[57] The draft guidelines prepared by the IOC Advisory Body of Experts on the Law of the Sea are contained in the report of the eighth meeting held in April 2008 in IOC/ABE-LOS VIII/3.

the Code is to minimize those impacts while adopting a pragmatic approach that facilitates the conduct of marine scientific research (see also para. 194 below).[58]

107. *Code of Conduct for Responsible Marine Research.* At its meeting in June 2008, the Commission for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Commission) adopted a Code of Conduct for Responsible Marine Research in the Deep Seas and High Seas of the OSPAR Maritime Area.[59] In the introduction of the Code it is stated, inter alia, that OSPAR acknowledges the provisions and entitlements of UNCLOS, particularly with regard to the general principles for the conduct of marine scientific research set out therein. It is furthermore stated that the "OSPAR Maritime Area includes large areas of deep and high sea"[60] and that "these are recognized as containing ecosystems that may have a lower resilience than shallower near shore areas, including several species and habitats that can be vulnerable to human disturbances".

108. The Code of Conduct aims to protect species and habitats that are vulnerable to different actual or potential human activities, including marine scientific research, and to encourage scientists to choose the most environmentally friendly research approach and minimize disturbances. It is based on the InterRidge statement of commitment to responsible research practices at deep-sea hydrothermal vents (see A/62/169, paras. 67-80) and also contains elements from the Code of Conduct for Marine Scientific Research Vessels (see para. 194 below).

109. *Guide to the implementation of the relevant provisions of UNCLOS.* Changes in technology and new discoveries in marine science are raising new challenges related to the implementation of UNCLOS provisions on marine scientific research. Taking into account the renewed interest of the international community in marine scientific research, as well as the need for cooperation and coordination in its promotion, the Division plans to extensively revise its 1991 publication *Marine Scientific Research: a Guide to the implementation of the relevant provisions of the United Nations Convention on the Law of the Sea.*[61] The new comprehensive publication will present recent advances in marine science, States' practice, challenges in the implementation of the relevant provisions of UNCLOS and practical guidance, where appropriate. In keeping with the practice developed when preparing the first publication, the Division intends to convene a meeting of a group of experts in early 2009, to discuss and provide comments on a draft to be prepared by the Division with the assistance of a consultant. Pursuant to IOC Assembly resolution XXIV-12, which authorized the Advisory Body of Experts on the Law of the Sea to contribute to the updating of the Division's 1991 publication, the IOC secretariat has indicated its willingness to collaborate with the Division, as required.

[58] For the text of the Code, see: http://www.isom-info.org/phptoweb/isom/isom-menu.php.

[59] OSPAR 08/24/1, annex 6; see also www.ospar.org/documents/dbase/decrecs/agreements/08-01e_code%20of%20conduct%20marine%20research.doc.

[60] For the purposes of the OSPAR document, *deep sea* follows the FAO definition and means areas of the sea deeper than 200 metres, and *high seas* mean the water column and/or the seabed in areas beyond national jurisdiction, within the OSPAR Maritime Area.

[61] United Nations publication, Sales No. E.91.V.3.

B. Early warning systems

110. As reported to the forty-first session of the IOC Executive Council, recent developments at the global and regional levels in establishing tsunami warning systems include the following (see IOC-EC-XLI/3 Prov.).

111. At the global level, the IOC Working Group on Tsunamis and Other Related Hazards to Sea-Level and Mitigation Systems, established by the IOC Assembly at its twenty-fourth session (IOC Assembly resolution XXIV-15; and A/62/66/Add.1, para. 114), reviewed the draft framework document for a global tsunami and other ocean-related hazards early warning system (IOC/TOWS-WG-I/3, annex IV) at its first meeting in April 2008. In order to improve efficiency in the governance and mode of operation of the intergovernmental coordination groups responsible for the development of tsunami warning systems, the Working Group committed itself to work on a number of issues, including: (a) exchange of seismic data; (b) adoption of standards and guidelines; (c) addressing outstanding telecommunication issues; and (d) assisting the relevant subsidiary bodies to "act as one" in interaction with partners such as the International Strategy for Disaster Reduction and the World Meteorological Organization.

112. *Indian Ocean Tsunami Warning System and Mitigation System.* At its fifth session in April 2008, the Intergovernmental Coordination Group for the system adopted the Task Team's Implementation Plan for an interoperable network of Regional Tsunami Watch Providers for the Indian Ocean. With most member States commencing their transition to becoming Regional Tsunami Watch Providers as early as June 2008, the interim advisory services currently provided by the Japan Meteorological Agency and the Pacific Tsunami Warning Center in Hawaii are expected to be completed by the end of 2010. In addition, Indonesia will be officially launching the Indonesia Tsunami Early Warning System on 11 November 2008.

113. *Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas.* At its fourth meeting in November 2007, the Intergovernmental Coordination Group for the system established an ad hoc task team on the architecture for a regional tsunami watch centre. The task team will also investigate options for the establishment of a regional tsunami information centre. It was noted that funds were required to improve the seismic and sea level network, particularly on the coast of North Africa, as well as to enhance the availability and exchange of existing tide gauge data (see also A/63/63, para. 238).

114. *Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions.* At its third session in March 2008, the Intergovernmental Coordination Group for the system accepted a proposal to establish core networks of seismic stations and sea level stations for tsunami monitoring purposes. Data from the core network of seismic stations will be freely and openly available to the national and regional tsunami warning centres for the timely production of tsunami and other early warning information. The Intergovernmental Coordination Group has also produced a compilation of best practices on preparedness and readiness for resilience to tsunami and other coastal hazards, at the community level. In addition, the Group will identify the technical, logistical and administrative requirements of a regional tsunami warning centre for the purpose of establishing such a centre for the Caribbean region by 2010.

115. *Tsunami Early Warning System in the Pacific*. The Intergovernmental Coordination Group for the system has reviewed progress in the South-West Pacific and on the Pacific coast of Central America, in the areas of: seismological and sea level monitoring and evaluation; hazard identification; emergency management and resilience and interoperability of warning systems. At its twenty-second session in September 2007, the Intergovernmental Coordination Group decided to promote the establishment and maintenance of national tsunami warning centres in the region; improve the capabilities of the seismic and sea level monitoring networks; provide standard operational system-description documents; and increase support to member States that have not yet sufficient capacity to develop tsunami warning systems. The role of the IOC Subcommission for the Western Pacific and ASEAN was highlighted in relation to supporting capacity-building in that context.

C. Recent developments in marine technology

116. Recent developments in marine technology include those presented below.

117. *Autonomous unmanned undersea vehicles*. Autosub6000 is a new autonomous unmanned undersea vehicle which can dive to 6,000 metres water depth and undertake missions without remote-control. Two expeditions over the next three years are planned with the vehicle in the as yet unexplored Cayman Trough, the world's deepest chain of undersea volcanoes (see www.noc.soton.ac.uk/nocs/news.php?action=display_news&idx=492).

118. *Energy sources*. The world's first commercial-scale tidal turbine, the "SeaGen", located in Northern Ireland's Strangford Lough, in the United Kingdom, has successfully delivered electricity onto the grid for the first time after being installed in May 2008.[62] The SeaGen was developed by Marine Current Turbines, and once fully operational will generate 1.2 megawatts of power. The next project is an installation off the coast of Anglesey in the United Kingdom, where a tidal farm producing 10.5 megawatts using several SeaGen turbines is hoped to be commissioned around 2011/2012.

119. Companies in some States are developing floating wind-turbines to allow wind power to be generated in deeper waters in areas where wind energy may be stronger (see www.economist.com/search/displaystory.cfm?story_id=11482484). Currently mounted offshore turbines can be anchored in water up to 40 metres depth, although prototype turbines that can operate in 150 metres of water are being developed for installation in 2010 (see sway.no/assets/files/SWAY.pdf).

120. *Pollution*. Scientists at the Massachusetts Institute of Technology have constructed a nanoporous membrane which is able to selectively absorb materials based upon their behaviour and water affinities (see dx.doi.org/10.1038/nnano.2008.136). This has application for environmental remediation after oil spills; biomolecule purification and seawater desalination. The membrane can selectively absorb oils up to 20 times its own weight.

121. *Shipping*. A new low-speed shipping engine has been produced which is claimed to be not only more reliable, and requiring less maintenance, but also more

[62] See http://www.marineturbines.com/3/news/article/10/world_s_first_commercial_scale_tidal_power_system_feeds_electricity_to_the_national_grid__/.

fuel efficient and said to have lower exhaust gas emissions, including nitrogen oxides (NOx) and CO_2.[63] The RTX-4 research engine which is being tested utilizes technology which is expected to reduce NOx content of exhaust gases by more than 90 per cent at the engine outlet.

122. Aerofoil wingsails have been tested on a seismic exploration vessel while under working conditions, with long seismic streamers in tow, and found, under typical North Sea conditions, that they saved more than 5 per cent of fuel consumption (see www.shadotec.com/0805_PressRelease_v2.pdf).

123. Recent developments in satellite navigation systems include the first-time use by the Northern Lighthouse Board, United Kingdom, of the Galileo-type navigation to provide seamless and continuous navigation from a coastal area, through port approach, and into the port area to develop an understanding of the maritime uses of Galileo for navigation (see www.nlb.org.uk/news/PR2008/PR3_2008.htm). Galileo is a global navigation satellite system under development by the European Union (EU) and European Space Agency. It will be an alternative and complementary to the Global Positioning System and the global navigation satellite system (see www.esa.int/esaNA/galileo.html).

VIII. Conservation and management of marine living resources

A. Marine fishery resources

124. The present section complements the information contained in the report of the Secretary-General on sustainable fisheries (A/63/128) on steps taken to improve the conservation and management of marine fishery resources by providing information on some recent developments in 2008[64] (see also chap. III, sect. D, and paras. 135 and 147 of the present report).

125. FAO has convened a number of Technical Consultations in 2008. The Technical Consultation on International Guidelines for the Management of Deep-Sea Fisheries in the High Seas met in February[65] and August 2008. While the Secretary-General will provide a report to the General Assembly at its sixty-fourth session on the action taken by States and regional fisheries management organizations/arrangements to give effect to paragraphs 83 to 90 of resolution 61/105 to address the impacts of fishing on vulnerable marine ecosystems,[66] an example of a recent development in that regard is the adoption of measures by the North East Atlantic Fisheries Commission at an extraordinary meeting of the Commission held in July 2008.[67]

126. The FAO Technical Consultation to draft a legally binding instrument on port State measures to prevent, deter and eliminate IUU fishing was held in June 2008.

[63] See www.wartsila.com/,en,press,0,tradepressrelease,F01CF4E7-9A5F-462E-A8ED-1E1F2D4AF74B,67E2905E-8C97-48F9-8335-91F9D441F946.htm.

[64] This section does not provide an exhaustive review of developments within regional fisheries management organizations/arrangements.

[65] TC:DSF2/2008/2, available from ftp://ftp.fao.org/FI/DOCUMENT/tc-dsf/2008_2nd/Default.htm.

[66] Interim reports of action taken by States and regional fisheries management organizations/arrangements are contained in recent reports of the Secretary-General on sustainable fisheries (see A/62/260, paras. 60-96, and A/63/128, paras. 63-78).

[67] Press report, dated 3 July 2008, concerning the outcome of the extraordinary meeting (www.neafc.org/index.htm).

The resumed session will be held in January 2009. In the Statement of Commitment adopted in July 2008, the Ministers responsible for marine fisheries of the Southern African Development Community resolved to take a broad range of measures at the regional and national levels to deter and discourage IUU fishing in the region of the Southern African Development Community. These measures included, inter alia, the development of national plans of action against IUU fishing, which would form the basis of a regional plan of action; possible establishment of a regional monitoring, control and surveillance centre and development of standard boarding and inspection procedures; the development of national and regional port State measures, including the prohibition of access to ports by vessels listed on regional fisheries management organizations/arrangements negative vessel lists; improved flag State control; the strengthening of monitoring, control and surveillance; and the development of specific measures including trade-related measures, traceability requirements, requirements for vessel monitoring systems, and implementation of a progressive ban on trans-shipment of fish at sea. A plan of action for the implementation of the Statement of Commitment is to be developed by June 2009, and the progress on the implementation of the Statement is to be reviewed at the end of 2011.[68]

127. The Vava'u Declaration on Pacific Fisheries Resources, adopted at the thirty-eighth Pacific Islands Forum in October 2007, contains commitments with respect to the conservation and management of highly migratory tuna species. These included: (a) seeking the urgent adoption of measures by the Western and Central Pacific Fisheries Commission to address overfishing of bigeye and yellowfin, including a reduction in longline catches and addressing purse seine fishing, and specific steps to reduce the catch of juvenile bigeye and yellowfin; (b) recognizing the aspirations of small island developing States to develop their domestic fisheries and calling on developed member countries of the Commission to implement measures to support such endeavours; and (c) developing and implementing a comprehensive regional monitoring, control and surveillance strategy.[69] The Parties to the Nauru Agreement Third Implementing Arrangement, administered by the Pacific Islands Forum Fisheries Agency came into effect on 15 June 2008. The Third Implementing Agreement provides for new measures to conserve and manage tuna stocks in the EEZs and high seas pockets of member countries. The measures include restrictions concerning areas where fishing vessels may be licensed to fish, use of fish aggregating devices, requirements for retention of catch onboard, and 100 per cent coverage of purse seine fishing vessels with observers.[70]

B. International Whaling Commission

128. At its sixtieth annual meeting in June 2008, the International Whaling Commission (IWC) reviewed the status of a number of large whale stocks, giving special attention to the endangered western North Pacific gray whale. It agreed to work to mitigate anthropogenic threats to that population and recognized the value of continuing to cooperate with the World Conservation Union Western Gray Whale

[68] The Statement of Commitment is reproduced at www.stopillegalfishing.com/statement_of_commitment.html.

[69] For the 2007 Forum Communiqué, see www.forumsec.org.fj/pages.cfm/documents/other/?PageIndex=1.

[70] See Press Statement FFC 67, dated 19 May 2008, at http://www.ffa.int/node/1083.

Advisory Committee. The Commission also agreed that anthropogenic mortality of western North Atlantic right whales should be reduced to zero. It endorsed the research recommendations of the Scientific Committee in respect of small cetaceans in the southeastern Pacific region, including the vaquita, the conservation status of which is of particular concern.[71] A new process developed by the Scientific Committee for the review of special permits for whaling was also endorsed by the IWC.[72]

129. IWC agreed to hold a workshop on welfare issues associated with the entanglement of large whales to develop guidelines for dealing with entangled whales. During the intersessional period, workshops will also be held by the Scientific Committee on: the effects of climate change on cetaceans; and the second phase of the Commission's POLLUTION 2000+ programme, which addresses the effects of chemical pollutants on cetaceans. In relation to ship strikes, IWC is developing an international database to help assess its importance by species and area and assist in the development of mitigation measures. The Commission is working with a number of other relevant organizations on this issue, including IMO, the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Areas (ACCOBAMS) and the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS)[73] (see also paras. 63, 145 and 193 of the present report).

130. IWC established a Small Working Group on the Future of the IWC to assist it in reaching consensus on 33 issues listed in a table attached to the decision.[74] It further established an Intersessional Correspondence Group on Issues Related to the Scientific Committee.[75]

IX. Marine biological diversity

A. Recent measures to address activities and pressures on marine biological diversity

1. General Assembly Ad Hoc Open-ended Informal Working Group

131. The Ad Hoc Open-ended Informal Working Group met from 28 April to 2 May 2008, in accordance with paragraph 91 of General Assembly resolution 61/222 and paragraph 105 of resolution 62/215, under the chairmanship of Juan Manuel Gómez-Robledo (Mexico) and Robert Hill (Australia). The meeting based its discussions on the information contained in the report of the Secretary-General on oceans and the law of the sea (A/62/66/Add.2) as well as on the format and annotated provisional agenda and organization of work (A/AC.276/2).

132. The outcome of the meeting consists of a joint statement of the Co-Chairpersons (A/63/79), which provides a summary of key issues, ideas and proposals raised during the meeting under the various agenda items, as well as some

[71] See IWC Press Release, at www.iwcoffice.org/meetings/meeting2008.htm.

[72] See http://www.iwcoffice.org/_documents/sci_com/SCRepfiles2008/Annex%20P%20FINALsq.pdf.

[73] See note 153 above.

[74] IWC/60/24, annex B: "Terms of Reference for the Small Working Group on the Future of the IWC".

[75] Ibid., annex C: "Terms of Reference for the Intersessional Correspondence Group on Issues Related to the Scientific Committee".

concluding remarks based on their assessment of the discussions noting the need for ongoing consideration by the General Assembly of the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction, in particular within the framework of the Working Group. Based on a number of proposals made during the discussions, the Co-Chairpersons identified a number of issues which the General Assembly may wish to consider referring to the Working Group (A/63/79, para. 54).

2. Conference of the Parties to the Convention on Biological Diversity

133. At its ninth meeting, in May 2008, the Conference of the Parties to the Convention on Biological Diversity adopted decision IX/20 on "Marine and coastal biodiversity", as well as several other decisions of relevance to marine biodiversity (see paras. 149, 161 and 182 below).

134. In its decision IX/20, the Conference of the Parties adopted scientific criteria for identifying ecologically or biologically significant marine areas in need of protection in open ocean waters and deep sea habitats and scientific guidance for designing representative networks of MPAs (see para. 218 below). Furthermore, having reiterated the General Assembly's central role in the conservation and sustainable use of biodiversity in marine areas beyond national jurisdiction, the Conference of the Parties addressed a number of pertinent issues. In particular, it invited all interested actors, including in the context of the General Assembly Ad Hoc Open-ended Informal Working Group (see paras. 131-132 above), to cooperate in further developing scientific and technical guidance for the implementation of environmental impact assessments and strategic environmental assessments for activities and processes under their jurisdiction and control which may have significant adverse impacts on marine biodiversity beyond national jurisdiction, noting the need for capacity-building for developing countries and the challenges and difficulties in carrying out such assessments in areas beyond national jurisdiction. To that end, the Conference of the Parties decided to convene an expert workshop to discuss scientific and technical aspects relevant to environmental impact assessments in areas beyond national jurisdiction, with a view to contributing to the development of such scientific and technical guidance.

135. The Conference of the Parties also called for further scientific research on a number of issues which are already the subject of in-depth consideration in the General Assembly or other international organizations. In particular, recognizing the respective roles of FAO and IMO, the Conference of the Parties requested the Executive Secretary of the Convention on Biological Diversity to compile and synthesize, in collaboration with States and relevant organizations, and to make available at future meetings, scientific information on: the impacts of destructive fishing practices, unsustainable fishing, and IUU fishing on marine biodiversity and habitats; the potential impacts of direct human-induced ocean fertilization on marine biodiversity (see paras. 278-280 below); and ocean acidification and its impacts on marine biodiversity and habitats, which is identified as a potentially serious threat to cold-water corals and other marine biodiversity. Furthermore, further research was requested in order to improve an understanding of marine biodiversity, especially in selected seabed habitats and marine areas in need of protection, paying special attention to those ecosystems and critical habitats that are relatively unknown. A call was also made for states and relevant organizations to collaborate with developing countries, as well as countries with economies in transition, in enhancing their

scientific, technical and technological capacities to engage in activities aimed at conservation and sustainable use of marine biodiversity, including through specialized training, participation in research, and regional and subregional collaborative initiatives.

B. Initiatives regarding specific ecosystems

136. *Deep sea ecosystems*. Both the General Assembly Ad Hoc Open-ended Informal Working Group (see paras. 131-132 above) and the Conference of the Parties of the Convention on Biological Diversity have considered matters of relevance to deep sea ecosystems (see paras. 134-135 above).[76]

137. Based on the results of the Kaplan project, a joint project of the International Seabed Authority and the J. M. Kaplan Fund to study biodiversity, species range and gene flow in the abyssal Pacific nodule province carried out from 2002-2007, the Authority is discussing with the Global Census of Marine Life on Seamounts the possibility of conducting a similar study on the genetic make-up of plant and animal life on seamounts.[77]

138. As research continues to assess the biodiversity and vulnerability of deep sea ecosystems, a recent study by the British Antarctic Survey found that shrinking sea ice is significantly increasing the rate at which icebergs scour the Antarctic seabed, where the majority of all Antarctic life occurs, with possible severe effects on the type and number of marine organisms and changes in the distributions of key species (see http://www.antarctica.ac.uk/press/press_releases/press_release.php?id=522).

139. *Islands*. Island biodiversity is more particularly vulnerable to the impacts of climate change, sea-level rise and invasive species. A number of initiatives have been undertaken in recent years to increase islands' resiliency to such pressures. In particular, the Global Island Partnership brings together Governments and intergovernmental and non-governmental organizations, and aims to build leadership and partnerships to promote and support implementation of the Convention on Biological Diversity programme of work on island biodiversity as well as other relevant global policies. At the ninth meeting of the Conference of the Parties, and with the support of the Partnership, leaders from across the Caribbean announced the Caribbean Challenge, which aims to protect at least 20 per cent of their marine and coastal habitats by 2020.[78] The initiative follows similar commitments in other regions, such as the Micronesia Challenge (see www.metconservation.org) and the Coral Triangle Initiative (see www.cti-secretariat.net).

140. In reviewing the implementation of the island biodiversity work programme, the Conference of the Parties to the Convention on Biological Diversity, at its ninth meeting, encouraged the use, as appropriate, of the biogeographical approach when implementing the programme of work, and stressed that the management and eradication of invasive alien species, climate change adaptation and mitigation

[76] For recent developments within OSPAR, see para. 107 above.

[77] See Biodiversity, species range and gene flow in the abyssal Pacific nodule province: predicting and managing the impacts of deep seabed mining (ISBA/14/C/2).

[78] The Bahamas, the Dominican Republic, Grenada, Jamaica, and Saint Vincent and the Grenadines are currently partners in the Challenge. See www.cbd.int/doc/programmes/areas/island/glispa-2008-05-27-press-en.pdf.

activities (see para. 266 below), establishment and management of MPAs, capacity-building, access to, and fair and equitable sharing of the benefits arising out of the utilization of genetic resources, and poverty alleviation required particular efforts in the implementation of the programme of work (decision IX/21).

141. UNEP-World Conservation Monitoring Centre, with partners, is developing a global islands information portal and database to assist in the assessment of scientific information on, and compilation of, ecological criteria for the identification of marine areas that require protection in the world's island areas.[79]

142. *Coral reefs*. According to a recent study, one third of reef-building corals around the world is threatened with extinction, with the main threats coming from climate change and localized stresses resulting from destructive fishing, declining water quality from pollution, and the degradation of coastal habitats.[80] The urgent need for immediate action to address threats to coral reefs to increase their resiliency to the impacts of climate change, in particular chronic stressors such as overfishing and decreasing water quality, was highlighted at the eleventh International Coral Reef Symposium in July 2008, which considered the state of coral reef science and management.[81] In light of the importance of sharks to the health and resiliency of coral reef ecosystems, the General Meeting of the International Coral Reef Initiative, convened immediately after the Symposium, called upon Initiative members and other Governments and relevant organizations to raise awareness of the importance of sharks, improve data collections, support increased research, and promote implementation of General Assembly resolution 62/177 on sustainable fisheries and the FAO International Plan of Action for the Conservation and Management of Sharks.[81]

C. Measures for specific species

143. *Cetaceans*. According to recent assessments, some large whale species, including the humpback, are now less threatened with extinction. The humpback whale has moved from "vulnerable" to "least concern" on the World Conservation Union Red List of Threatened Species, although two subpopulations remain endangered. The southern right whale has also moved to "least concern". Most small coastal and freshwater cetaceans, however, are moving closer to extinction. Overall, nearly a quarter of cetacean species are considered threatened.[82] Work on various causes of disturbance to and mortality of cetaceans is continuing in a number of forums (see paras. 191-196 below).

144. MEPC approved the inclusion of a new high-priority item on "Development of a guidance document for minimizing the risk of ship strikes with cetaceans" on the

[79] Information provided by UNEP.

[80] "One-third of reef-building corals face elevated extinction risk from climate change and local impacts", *Science* (25 July 2008).

[81] International Coral Reef Initiative General Meeting, 12-13 July 2008, Summary of key conclusions and outcomes, at www.icriforum.org/secretariat/ICRSGM/PDF/ICRI_ICRSGM_Summary_annexes_link.pdf.

[82] "Humpback whale on road to recovery", IUCN Press Release, 12 August 2008, available with the cetacean assessments at http://www.iucnredlist.org/wnew/news#b5167. See also the report of the IWC Scientific Committee, at www.iwcoffice.org/_documents/commission/IWC60docs/iwc60docs.htm.

agenda of its next meeting in October 2008, with a target completion date of 2010 (MEPC 57/21, paras. 18.1-18.6). Work on ship strikes is also ongoing in the context of IWC (see para. 129 above).

145. In a regional context, the fifteenth meeting of ASCOBANS, held from 31 March to 3 April 2008, reviewed new information on the impacts of pollution, underwater sound (see para. 196 below) and disturbance, including strikes with high-speed ferries and other vessels and personal crafts, chemical pollution, and offshore energy production and extractive activities. Possible inclusion of all cetacean species in the scope of ASCOBANS was discussed, in particular in light of the interaction with IWC, the North Atlantic Marine Mammal Commission and EC. In the latter case, the Habitats Directive and the exclusive competency of EC in fisheries matters are particularly relevant.[83]

146. The fifth meeting of the Scientific Committee of ACCOBAMS in April 2008, continued work on, inter alia, MPAs, the impacts of noise, stranding networks,[84] interactions with fisheries, climate change, and whale watching. The ban on drift nets adopted by the third meeting of the parties (resolution 3.1 amending the Agreement) entered into force in the ACCOBAMS Agreement Area on 22 March 2008.

147. *Trade in endangered species*. The Animals Committee of the Convention on International Trade in Endangered Species and Wild Fauna and Flora (CITES) considered issues pertaining to a number of marine species at its twenty-third meeting, in April 2008. In particular, the Committee discussed the conservation and management of sharks, including issues related to IUU fishing for sharks. It requested the CITES secretariat to monitor discussions within the World Customs Organization regarding the development of a customs data model, and the inclusion therein of a data field to report trade at a species level. It also encouraged the Standing Committee to identify and assess options for developing a more universal tracking system, and encouraged parties to develop and utilize customs codes for shark fin products that distinguish between dried, wet, processed and unprocessed fins. It also urged Range States of sawfishes (Pristidae) that have not already done so to adopt appropriate national conservation and management measures to protect species, mitigate by-catch, and identify and protect critical habitat. With regard to sturgeons and paddlefish, the Committee urged the CITES secretariat to promote the holding of workshops to review existing sturgeon stock assessment/total allowable catch determination methodology and elaborate scientific methodologies that are internationally acceptable for the stocks of the Caspian Sea, Amur/Heilongjiang River and Black Sea, Danube River and Azov Sea, using the FAO reviews on Caspian Sea and Amur River stock assessment methodology (see www.cites.org/eng/com/AC/23/E-AC22-Ex-Sum4.pdf).

148. At its fifty-seventh meeting in July 2008, the Standing Committee agreed to establish a Working Group on "Introduction from the sea". The Working Group met informally during the meeting to address organizational matters (see www.cites.org/eng/com/SC/57/sum/E57-Exe-Sum-4.pdf). A meeting of the Working Group is tentatively scheduled to be held in early 2009 to work on the development of a draft discussion document and resolution for consideration by the fifty-eighth meeting of

[83] Report of the 15th Meeting of the ASCOBANS Advisory Committee, available from www.service-board.de/ascobans_neu/files/ac15-report.pdf.

[84] Stranding networks are networks of public and private entities dedicated to improved response and care for stranded marine mammals, among others.

the Standing Committee. The Working Group will work by electronic means in the meantime.

D. Genetic resources

149. In its decision IX/12 entitled "Access and benefit-sharing", the Conference of the Parties to the Convention on Biological Diversity, at its ninth meeting, welcomed the progress made in the Ad Hoc Open-ended Working Group on Access and Benefit-sharing and reiterated its request for the Working Group to complete the elaboration and negotiation of the international access and benefit-sharing regime at the earliest possible time before the tenth meeting of the Conference of the Parties. It was agreed that the "International Regime" contained in annex I to decision IX/12 shall be the basis for further elaboration and negotiation of the international regime. The scope of the regime is still under negotiation, as well as the question whether marine genetic resources found in areas beyond national jurisdiction should be covered.

150. At its twelfth session in February 2008, the Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore of the World Intellectual Property Organization considered developments within the Convention on Biological Diversity, FAO and the World Trade Organization. In particular, discussions continued on a possible requirement for disclosure of source or origin of the resources in patent applications. These discussions will continue at the next session.[85]

151. The United Nations Declaration on the Rights of Indigenous Peoples, adopted by the General Assembly on 13 September 2007 (resolution 61/295, annex), which recognizes the right of indigenous peoples to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in that regard, also recognizes the right of indigenous peoples to maintain, control, protect and develop, inter alia, their traditional knowledge and the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, and knowledge of the properties of fauna and flora, among others. The Declaration also recognizes their right to maintain, control, protect and develop their intellectual property over such traditional knowledge (ibid., arts. 25 and 31).

152. Issues relating to marine genetic resources beyond areas of national jurisdiction were considered by the General Assembly Ad Hoc Open-ended Informal Working Group at its meeting in 2008 (see A/63/79).

[85] See initial draft report of the twelfth session of the Intergovernmental Committee (WIPO/GRTKF/IC/12/9 Prov.).

X. Protection and preservation of the marine environment and sustainable development

A. Introduction

153. The resources provided by ocean and coastal ecosystems as well as various ocean uses sustain billions of people around the world through, inter alia, the provision of food, energy, transportation and employment. The oceans also play a significant role in regulating global climate and in the oxygen cycle. Global drivers of change, such as population growth, economic activities and consumption patterns, have placed increasing pressure on marine ecosystems.[86] Intensification of large-scale agriculture contributes to over-nutrification of the oceans and creation of dead zones in coastal areas. Shipping and commerce add to the influx of pollutants and alien species. Ill-planned tourism in ecologically sensitive areas often causes irreversible damage. Overfishing of coastal and pelagic stocks, when considered in combination with damage to the coastal nursery grounds of many marine species, not only has damaging consequences on marine ecosystems but also impacts the economies of many countries and the livelihood of millions of people. Global climate change is further exacerbating adverse impacts on coastal and ocean ecosystems.[87] Expansion and increase in the number of dead zones,[88] sudden drops in puffin numbers,[89] increase in the number and occurrences of jellyfish,[90] cetacean strandings,[91] decreased catch in some fish species, and coral bleaching are some of the symptoms of a degraded marine environment.

154. Changes in the environment, including the marine environment, in conjunction with financial instability, slowing global economic growth, and rising food and fuel prices, negatively impact on sustainable development, as was recognized by the Economic and Social Council at the highest level during its 2008 session.[92] Yet, it has been reported that management of the impacts of human activities on marine ecosystems has had limited results so far, in particular in coastal ecosystems, owing to a number of factors, including limited appreciation for the value of healthy marine ecosystems, limited science, fragmentation of management responsibilities across and within jurisdictions, and limited buy-in from local communities.[93] As noted at the fourth Global Forum on Oceans, Coasts and Islands, held in April 2008,

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[86] See UNEP, *Global Environment Outlook GEO 4: environment for development* (2007).

[87] See United Nations University/International Network on Water, Environment and Health, *Stemming Decline of the Coastal Ocean: Rethinking Environmental Management* (2008) and footnote 86 above.

[88] It has been estimated that the dead zone of the Gulf of Mexico could be the largest on record in the summer of 2008, measuring up to 8,800 square miles. See "NOAA predicts largest Gulf of Mexico 'dead zone' on record", *Science Daily* (16 July 2008). See also "Spreading dead zones and consequences for marine ecosystems", *Science* (15 August 2008).

[89] "Wildlife mystery: sudden drop in puffin numbers", *The Guardian* (26 July 2008).

[90] "Swarms of stinging tentacles offer hint of oceans' decline", *New York Times* (3 August 2008).

[91] See report of the IWC Standing Working Group on Environmental Concerns, 2008 IWC Scientific Committee report, annex K, at http://www.iwcoffice.org/sci_com/screport.htm.

[92] See Draft ministerial declaration of the 2008 high-level segment of the Economic and Social Council, submitted by the President of the Council: Implementing the internationally agreed goals and commitments in regard to sustainable development (E/2008/L.10).

[93] Stemming Decline of the Coastal Ocean: Rethinking Environmental Management, United Nations University-International Network on Water, Environment and Health, 2008.

furthering efforts to develop and implement integrated ocean management, including ecosystem approaches, is necessary if we are to make progress towards a number of internationally agreed goals related to the oceans (see http://www.globaloceans.org/globalconferences/2008/index.html). Support for scientific research, cooperation at all levels, involvement of all stakeholders, sustained capacity-building are essential for an effective management and should therefore be further promoted. An example of a recent initiative in that regard, is a five-year Global Campaign for Sustainable Ocean Governance "Waves of Change", which aims to empower and mobilize women and youth and build a global partnership network to build and maintain broad public support for good ocean governance was launched at the meeting of Pacem in Maribus XXXII in November 2007.[94]

B. Ecosystem approaches

155. The General Assembly, in resolution 62/215, inter alia, reaffirmed paragraph 119 of its resolution 61/222 regarding ecosystem approaches and oceans, including the proposed elements of an ecosystem approach, means to achieve implementation of an ecosystem approach and requirements for improved application of an ecosystem approach, as had been agreed to at the seventh meeting of the Consultative Process (see A/61/156, part A). It also noted that ecosystem approaches to ocean management should be focused on managing human activities in order to maintain and, where needed, restore ecosystem health to sustain goods and environmental services, provide social and economic benefits for food security, sustain livelihoods in support of international development goals, including those contained in the Millennium Declaration, and conserve marine biodiversity. The General Assembly recalled that States should be guided in the application of ecosystem approaches by a number of existing instruments, in particular UNCLOS and its implementing Agreements, as well as other commitments, such as those contained in the Convention on Biological Diversity and the World Summit on Sustainable Development.

156. A number of global and regional initiatives continue to promote and facilitate the implementation of ecosystem approaches, including in the context of ocean management. Capacity-building efforts are part of this process. For example, in order to assist States in the implementation of an ecosystem approach, the Division has prepared a manual and developed a course on the development and implementation of ecosystem approaches to the management of human activities. The aim of the course is to introduce participants in the training to the range of issues surrounding the development and implementation of ecosystem approaches, including scientific, economic, social and legal aspects. The first regional delivery of the course, organized in cooperation with UNEP, is scheduled to take place for countries in East Africa in the last quarter of 2008.

157. At its tenth special session in February 2008, the UNEP Governing Council/Global Ministerial Environment Forum endorsed a new medium-term strategy for 2010-2013, which identified ecosystem management as one of the six thematic areas for priority action by UNEP.[95] As a result, UNEP will catalyse

[94] See the Malta Declaration, adopted by Pacem in Maribus XXXII, in November 2007.

[95] Proceedings of the Governing Council/Global Ministerial Environment Forum at its tenth special session, UNEP/GCSS.X/10.

integrated approaches for assessment and management of, inter alia, coastal and marine ecosystems, including through integrated water resources management, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), and the Regional Seas Programme (RSP) (see UNEP/GCSS.X/8). UNEP has indicated that it is developing a "Manual on the Ecosystem Approach to the Regional Seas Programmes".[79]

158. During 2007-2010, in order to support the achievement of the objectives of the International Waters focal area, GEF intends to focus on the reduction of nutrient over-enrichment and oxygen depletion from land-based pollution of coastal waters in large marine ecosystems (LMEs) consistent with GPA. The UNDP Oceans and Coastal Areas programme, through the LME programme, as well as through its flagship integrated coastal management programme, the Partnerships in Environmental Management for the Seas of East Asia, applies "top-down/bottom-up" approaches to promoting sustainable use of the oceans.

159. As indicated by the World Bank, it continues to support efforts, through training, awareness-raising and investments, to promote integrated coastal management in its client countries, particularly sub-Saharan Africa. It has, often in partnership with GEF, ongoing investments in integrated coastal management in Guinea-Bissau, Mozambique, Namibia, Senegal and the United Republic of Tanzania and a new project under design in Kenya. Coastal and marine ecosystems conservation is being integrated into rural development projects in Indonesia, the Philippines and Viet Nam. The World Bank is also engaging in the Pacific Islands to develop integrated watershed coastal area management programmes to support sustainable development.

160. The importance of LMEs from economic and environmental perspectives has recently been highlighted in a report entitled, "UNEP Large Marine Ecosystem report: A perspective on changing conditions in LMEs of the World Regional Seas", which analyses and documents scientific evidence and practical experiences of various LME projects.

161. In its decision IX/7 entitled "Ecosystem approach" (see UNEP/CBD/COP/9/29, annex I), the Conference of the Parties to the Convention on Biological Diversity noted that "the ecosystem approach remains a useful normative framework for bringing together social, economic, cultural and environmental values". The Conference of the Parties to the Convention on Biological Diversity, inter alia, urged States and relevant organizations to further promote the use of the ecosystem approach in all sectors and enhance intersectoral cooperation, and also promote the establishment of concrete national and/or regional initiatives and pilot projects, as well as to further implement capacity-building initiatives to applying the ecosystem approach. It also addressed the need to consider the challenge of incorporating land and marine tenure in the application of the ecosystem approach. It further invited States to develop guidelines for the application of the ecosystem approach for specific biogeographical regions and circumstances, where applicable and building upon existing efforts. In that regard, the work already undertaken by the General Assembly in relation to ecosystem approaches and oceans (see para. 155 above) will be relevant in the marine context.

162. The Convention on Biological Diversity Executive Secretary was requested by the Conference of the Parties to the Convention on Biological Diversity, subject to the availability of resources, to prepare communication materials and manuals on

applying the ecosystem approach, tailored to different user-groups, and ensure their adequate dissemination. As also noted in paragraphs 156-159 above, some organizations are already active in assisting States in the implementation of ecosystem approaches to oceans.

163. At the fourth Global Forum on Oceans, Coasts and Islands, which met on the theme "Advancing ecosystem management and integrated coastal and ocean management by 2010 in the context of climate change", it was recognized that climate-related issues will change the nature of ocean and coastal management by introducing increased uncertainty. The need to incorporate climate change planning into existing management processes, and to develop and apply new tools for vulnerability assessment was thus emphasized. It was recognized that operationalization in respect of ecosystem approaches remained a challenge and that countries needed sustained financing and technical support to implement ecosystem-based management and integrated coastal management. The need to strengthen linkages between ecosystem-based management and integrated coastal management was also highlighted.[96]

164. At the regional level, information on the activities undertaken by a number of LMEs is available from the detailed presentations made at the ninth Consultative Committee Meeting on LMEs, in July 2007, which reviews progress in the LME programmes on an annual basis (see http://www.lme.noaa.gov/Portal/jsp/Multimedia/2007_Paris.jsp). In the context of the Benguela Current Large Marine Ecosystem, a symposium was held in November 2007 to consider key scientific outcomes and other achievements of two regional marine programmes: the Benguela Environment Fisheries Interaction and Training and the Benguela Current Large Marine Ecosystem Programme. Topics under discussion at the symposium included marine scientific research, transboundary management of shared stocks, links between fisheries and the environment, monitoring the state of the ecosystem, marine pollution, the impacts of seabed mining and oil and gas production on the marine environment, as well as socio-economics and governance (see www.bclme.org). The Caribbean LME Project, which has for its objective the sustainable management of the shared living marine resources of the Caribbean LME and adjacent areas through an integrated management approach, was approved by the GEF for funding and implementation.[97] A Strategic Partnership for the Mediterranean LME between the Mediterranean Action Plan of UNEP and the World Bank for the de-pollution of the Mediterranean Sea has been endorsed by GEF. Its main objective is to assist participating countries in implementing reforms, agreed interventions and investments for pollution reduction, the safeguarding of biodiversity and to stop habitat degradation as outlined in the two strategic action plans, one for pollution reduction and the other for biodiversity conservation (see www.unepmap.org/index.php?module=news&action=detail&id=34).

165. As regards the role of fisheries management in implementing an ecosystem approach to marine management, the European Commission recently outlined how

[96] For the complete presentation of the discussions on ecosystem approaches during the fourth Global Forum on Oceans, Coasts and Islands, including in the context of areas beyond the limits of national jurisdiction, see www.globaloceans.org/globalconferences/2008/index.html.

[97] Report of the Association of Caribbean States to the Secretary-General pursuant to General Assembly resolution 61/197. See also www.gefweb.org/uploadedFiles/3-18-08%20CLME_Final.pdf.

the Common Fisheries Policy can help implement an integrated approach to protect the ecological balance of the oceans. The key objectives are to minimize the impacts of fishing on the wider marine environment by reducing the overall level of fishing pressure, and to ensure that fisheries measures are used fully to support the cross-sectoral approach defined by the EU Marine Strategy and Habitats Directives.[98]

166. The North Pacific Marine Science Organization organized a special session in September 2007 on the following themes: integration of observations and models to improve predictions of ecosystem response to physical variability; comparative marine ecosystem structure and functions; and the impact of an ecosystem approach on marine science, science-based advice and management on marine ecosystems (see www.pices.int/meetings/All_events_default.aspx#Sp_Ses).

C. Pollution from land-based activities

167. In many countries, overarching national development planning processes, such as poverty reduction strategies or United Nations Development Assistance frameworks, do not adequately address coastal and marine issues or issues related to watersheds draining into coastal areas. Coastal areas and marine resources often play a crucial role in the economic development of a country and consequently have an impact on the levels of poverty (see http://www.gpa.unep.org/news.html#52). The integration of coastal and marine resource issues into national development frameworks was therefore identified as a part of the new approach for GPA by the second session of the Intergovernmental Review Meeting on the Implementation of GPA, in October 2006.[99] Although the preservation of the marine environment and the protection of coastlines and coastal communities from pollution from land-based activities may be important in the context of fostering sustainable development and achieving the Millennium Development Goals, the process of mainstreaming coastal and marine into the national dialogue and policy-planning on development may be complicated. Policy-planners focusing on development and poverty alleviation often see coastal zone management as peripheral to their principle objective rather than as one of its central aspects. Changing such perceptions requires a concerted effort.

168. The UNEP GPA Coordination Office provides guidance for policymakers on how to mainstream coastal and marine issues in a new publication entitled *Making Mainstreaming Work: An analytical framework, guidelines and checklist for the mainstreaming of marine and coastal issues into national planning and budgetary processes*.[100] The publication contains an explanation of the mainstreaming process and sets forth the steps to be followed by policymakers, while emphasizing the need to tailor specific approaches to the situation of the particular State being targeted, through a process of analysis and dialogue with key stakeholders at the national level. It also contains guidelines for the mainstreaming of marine and coastal issues into national and budgetary processes in countries with and without a National Programme of Action, as well as checklists for such mainstreaming.[100]

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[98] See Communication issued in April 2008 at http://ec.europa.eu/maritimeaffairs/press/press_rel110408_en.html.

[99] A/62/66, paras. 268-272, and A/62/66/Add.1, paras. 172-174. Other priorities included financing and legislative and institutional strengthening.

[100] See http://www.gpa.unep.org. The publication was produced in collaboration with the Stockholm Environment Institute.

169. Wastewater-related problems have been identified by GPA as one of the major problems in coastal zones throughout the world. In particular municipal wastewater discharges are considered as one of the most significant threats to sustainable coastal development, affecting human health as well as environmental quality aspects, both resulting in economic losses.[101] The treatment of wastewater is one of the areas of focus of the 2008 International Year of Sanitation. The General Assembly has, inter alia, encouraged "all States, as well as the United Nations system and all other relevant stakeholders, to take advantage of the Year to increase awareness of the importance of sanitation and to promote action at all levels" (see resolution 61/192, para. 4). Information regarding regional initiatives aimed at addressing pollution from land-based activities is contained in section K below.

D. Pollution from ships

170. According to IMO, in spite of the rare major accident which can cause a spike in the annual statistics, the overall trend demonstrates a continuing improvement, both in the number of oil spills and quantity of oil spilled each year.[102] To a certain extent, this demonstrates the positive impacts of various international instruments aimed at preventing and controlling pollution from ships, in particular UNCLOS and MARPOL 73/78, as well as those relating to liability and compensation for damages caused by such pollution (see sect. I below). At the same time, other sources of pollution from ships, including invasive species through ballast water (see paras. 183-190 below) and greenhouse gas emissions continue to be a cause for concern (see paras. 271-277 below).

171. *Interpretation of annexes I and IV of MARPOL 73/78.* MEPC approved the Unified Interpretations on the meaning of "a similar stage of construction" for relevant regulations in MARPOL annex I (oil), and annex IV (sewage), as well as a modified Unified Interpretation to the relevant regulation in MARPOL annex I on the term "pump-room" (see MEPC 57/21, annexes 8 and 9).

172. *Review of annex V of MARPOL.* MEPC agreed to extend the target completion date of the work of the correspondence group on the review of MARPOL annex V (garbage) to 2009. A progress report will be submitted to MEPC at its fifty-eighth session, in October 2008 (ibid., para. 5.12).

173. *Review of MARPOL annex VI.* Air pollution from ships has received considerable attention from the international community. It has been reported in a recent study that pollution from ships, in the form of tiny airborne particles, including sulphur oxide (SOx) and NOx, is linked to premature deaths worldwide, and that cleaner shipping fuel could save tens of thousands of lives.[103]

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[101] UNEP/GPA, UNESCO-IHE, United Nations Division for Ocean Affairs and the Law of the Sea, TRAIN-SEA-COAST Programme, "Improving municipal wastewater management in coastal cities: training manual version 1" (February 2004), available from http://esa.un.org/iys/wastewater.shtml.

[102] "World Maritime Day 2007, IMO's response to current environmental challenges", background paper.

[103] See http://environment.newscientist.com/article.ns?id=dn12892&print=true, and http://www.transportenvironment.org/News/2008/2/Cleaner-ship-fuel-could-save-tens-of-thousands-of-lives.

174. In 2005, MEPC had agreed on the need to undertake a review of the MARPOL regulations for the prevention of air pollution from ships (annex VI) and the NOx Technical Code with a view to revising the regulations to take account of current technology and the need to further reduce emissions from ships. The review was subsequently carried out by the IMO Sub-Committee on Bulk Liquids and Gases, which included consideration of a comprehensive report from the informal Cross Government/Industry Scientific Group of Experts, which was established in 2007 to evaluate the effects of the different fuel options proposed under the revision of MARPOL annex VI and the NOx Technical Code (MEPC 57/4; see also MEPC 57/21, paras. 4.12-4.21).

175. Following its consideration of the outcome of the work of the Sub-Committee on Bulk Liquids and Gases (MEPC 57/4/23 and BLG 12/17, paras. 6.1-6.88 and annexes 4 and 5), MEPC, at its fifty-seventh session, approved proposed amendments to MARPOL annex VI and the NOx Technical Code with a view to their subsequent adoption at its fifty-eighth session in October 2008 (MEPC 57/21, paras. 4.1-4.58, and MEPC 57/21/Add.1, annexes 5 and 6). The proposed amendments provide for a progressive reduction in SOx emissions from ships.[104]

176. Progressive reductions in NOx emissions from marine engines were also agreed, with the most stringent controls applying to engines installed on ships constructed on or after 1 January 2016 operating in emission control areas.[104] The proposed amendments to the NOx Technical Code include a new chapter on the certification of existing engines to reflect the approach agreed for NOx regulation of engines constructed prior to 2000 in the proposed amended MARPOL annex VI.[105]

177. The revised MARPOL annex VI would allow for an emission control area to be designated for SOx and particulate matter, or NOx, or all three types of emissions from ships. Such a proposal from a party or parties to the annex would be considered for adoption by IMO if supported by a demonstrated need to prevent, reduce and control one or all three of these emissions from ships.

178. During the fifty-seventh session of MEPC, it was reported that in 2007, the worldwide average sulphur content in residual fuel oils was 2.42 per cent, representing a reduction of 0.17 percentage points from 2006 (see MEPC 57/21, para. 4.29). MEPC noted that the decrease may be explained by the entry into force of the Baltic and North Sea SOx Emission Control Areas and not by a reduction in the actual global sulphur content.

179. *Reception facilities*. At its sixteenth session, FSI continued work on the Action Plan to tackle the inadequacy of port reception facilities, and noted the low level of reporting of alleged inadequacies since 2005. It urged Member States to provide records of reception facilities in their ports and their contact points, and to disseminate the form for reporting alleged inadequacies of port reception facilities to shipping companies. MEPC will consider progress made on the action plan at its

[104] The global sulphur cap will be reduced initially to 3.50 per cent (from the current 4.50 per cent), effective 1 January 2012, and then progressively to 0.50 per cent, effective 1 January 2020, subject to a feasibility review to be completed not later than 2018, and in any event by 1 January 2025. Limits applicable in emission control areas would be reduced to 1.00 per cent (from the current 1.50 per cent), effective 1 March 2010, and further reduced to 0.10 per cent, effective 1 January 2015. See MEPC 57/21/Add.1, annex 5.

[105] Ibid., annex 6.

fifty-eighth meeting in October 2008. It is also expected to consider the issue of regional arrangements for reception facilities.

180. *Preparedness and response to pollution incidents*. MEPC approved the development of a Manual on chemical pollution to address legal and administrative aspects of hazardous and noxious substances, focusing initially on elements other than the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (the Hazardous and Noxious Substances Convention), as well as the development of a Guidance document on identification and observation of spilled oil. It also requested delegations to submit information on maritime-related incidents involving hazardous and noxious substances, starting 2008, to future sessions of the Technical Group on the International Convention on Oil Pollution, Preparedness, Response and Cooperation and the Protocol on Preparedness, Response and Cooperation to Pollution Incidents on Hazardous and Noxious Substances, with a view to expanding the current data set and to share lessons learned. MEPC further instructed the Technical Group to include in its work programme items on oil spill response in ice and snow conditions and on the updating of the IMO dispersant guidelines (MEPC 57/21, para. 6.8).

181. *Shipping in the Antarctic Area*. In light of concerns relating to the increased number and type of vessels operating in the Antarctic area, designated as a Special Area under MARPOL annexes I, II (noxious liquid substances) and V, as well as recent incidents involving ships in distress in the area, MEPC invited member Governments to submit relevant proposals at its future meetings and to the Sub-Committee on Bulk Liquid and Gases, the work programme of which includes an item entitled "Amendments to MARPOL Annex I on the use and carriage of heavy grade oil on ships in the Antarctic area" (see MEPC 57/21, paras. 20.16-20.19).

E. Introduction of invasive alien species

182. In decision IX/4, the Conference of the Parties to the Convention on Biological Diversity undertook an in-depth review of ongoing work on alien species that threaten ecosystems, habitats or species and addressed, inter alia, gaps and inconsistencies in the international regulatory framework. In particular, it invited the FAO Committee on Fisheries to note the lack of international standards governing invasive alien species that are not pests of plants under the International Plant Protection Convention, and to consider further ways and means to address this gap as it applies to the introduction, for fisheries and aquaculture, of alien species, including the development of clear and practical guidance. Collaboration between the Convention on Biological Diversity secretariat and IMO will continue, with a view to filling gaps and promoting coherence in the regulatory framework, reducing duplication, promoting other actions to address invasive alien species at the national level and facilitating support to Parties including through capacity-building. The Conference of the Parties encouraged States and, inter alia, IMO, FAO, the International Council for the Exploration of the Sea, and the UNEP Regional Seas Programme to consider, and where necessary, to put in place mechanisms to manage pathways for potential invasive alien species, especially in marine and coastal ecosystems, including shipping, trade and aquaculture and mariculture (see wwww.cbd.int/decisions).

183. Since the adoption of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention) in 2004, 14 States representing 3.55 per cent of the world merchant fleet's gross shipping tonnage have ratified the Convention. It will enter into force 12 months after the date on which 30 States, representing 35 per cent of the world tonnage, have become parties to the Convention.

184. It is estimated that approximately 10 billion tonnes of ballast water are transferred globally each year, potentially transferring species of sea life that may prove ecologically harmful when released into a non-native environment (see http://www.imo.org/home.asp). The General Assembly has thus repeatedly encouraged States that have not done so to ratify or accede to the Convention, thereby facilitating its early entry into force (see, e.g. resolution 62/215, para. 91). The MEPC has also urged IMO member States to ratify the Ballast Water Management Convention at their earliest possible opportunity (MEPC 57/21, para. 2.1).

185. At the fourth and fifth meetings of the Ballast Water Working Group of the Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) (November 2007 and January 2008, respectively), the Working Group reviewed seven proposals for approval of ballast water management systems that make use of active substances to treat ballast water prior to discharge into the marine environment.[106] After considering the GESAMP recommendations, the MEPC at its fifty-seventh session agreed to grant basic approval to four ballast water management systems and final approval to one ballast water management system that make use of active substances (MEPC 57/21, para. 2.7-2.20). Additional proposals will be considered by the GESAMP Ballast Water Working Group at its next meeting in 2008 and recommendations will be provided to the fifty-eighth meeting of MEPC in October 2008 (see generally document GESAMP 35/5/1).

186. MEPC also adopted a revised procedure for approval of ballast water management systems that make use of active substances in order to ensure proper application of the provisions contained in the Ballast Water Management Convention and the safeguards required by it (MEPC 57/21, paras. 2.23-2.38 and annex 1).

187. Ballast water management/treatment technology was also considered at an International Conference on Bio-fouling and Ballast Water Management in February 2008, organized by the National Institute of Oceanography of India, in association with the Directorate General of Shipping of India, and the GEF-UNDP-IMO Global Ballast Water Management Programme. The Conference also considered various other theme areas, including bio-films and bio-adhesion, bio-fouling community, larval biology, anti-fouling technology and marine bio-invasion (see also MEPC 57/INF.24 and www.bwmindia.com).

188. Recent developments at the regional level include the convening of the first GloBallast training workshop for the Caribbean region in Jamaica, from 18 to 22 February 2008. The workshop provided the necessary guidance for the establishment in Jamaica of the National Task Force and the National Action Plan for ballast water management and control (see MEPC 57/21, para. 2.29).

[106] Proposals were submitted by Germany, Japan, Norway, the Republic of Korea and South Africa.

189. In the Baltic Sea and North-East Atlantic, countries have been implementing, since 1 April 2008, the joint OSPAR/HELCOM General Guidance on the Voluntary Interim application of the D1 Ballast Water Exchange Standard in the North-East Atlantic and the Baltic Sea. A list of HELCOM Target Alien Species relevant for the risk assessments according to the Ballast Water Management Convention is also under development in the Baltic Sea.

190. Since the beginning of 2008, the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea and the Specially Protected Areas/Regional Activity Centre have been involved in the implementation of the UNDP-GEF-IMO GloBallast Partnership Project for the Mediterranean area, which aims at adopting by 2012 a regional strategy regarding the management of ships ballast water in the context of the Ballast Water Management Convention.

F. Ocean noise

191. A number of global and regional forums continue to address the potential threat posed by ocean noise to marine ecosystems. There are continuing calls for research, monitoring and efforts to minimize the risk of adverse effects on living marine resources.[107]

192. Noise generated by international shipping and its potential adverse impact on marine life has been considered recently by IMO. MEPC, at its fifty-seventh session, and MSC, at its eighty-fourth session, invited member Governments and interested entities to participate in the ongoing dialogue regarding the identification of potential adverse impacts associated with vessel noise and the potential mitigation of those impacts, and to send pertinent information on that issue to the Ocean Acoustics Programme within the United States Department of Commerce (see MEPC 57/21, paras. 20.9-20.14, and MSC 84/24, paras. 23.9-23.10).

193. The Scientific Committee of IWC agreed that there was a need for internationally coordinated research to address gaps in knowledge of sonar-related cetacean strandings, including improving the ability to conduct necropsies as soon as possible, standardizing data collection on the animal's environment at the time of death or stranding, and coordinating with military or other Government agencies so that all factors related to the stranding are examined.[108]

194. The 2007 Code of Conduct for Marine Scientific Research Vessels (see para. 106) and the 2008 OSPAR Code of Conduct for Responsible Marine Research (see para. 107) provide that the level of and duration of underwater noise should be restricted to the minimum level and duration to achieve results should be used and acoustic frequencies chosen in order to minimize impacts on marine life. In areas where marine mammals are known or suspected to exist, additional measures may be required, for example, soft starts, visual surveillance and acoustic monitoring.

195. Within the European Union, the Marine Strategy Framework Directive[109] establishes a framework within which member States are required to take the necessary measures to achieve or maintain good environmental status in the marine

[107] For peer-reviewed scientific studies on the impacts of ocean noise on marine living resources, see the website of the Division at www.un.org/depts/los/general_assembly/noise/noise.htm.

[108] See note 154.

[109] Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008.

environment by the year 2020 at the latest. The term "good environmental status" is defined in article 3 and means, inter alia, that anthropogenic inputs of substances and energy, including noise, into the marine environment do not cause pollution effects.

196. At its fifteenth meeting, the ASCOBANS Advisory Committee established an intersessional working group on the assessment of acoustic disturbance. Under the terms of reference, the working group is to focus on three main human activities, namely use of sonar, seismic surveys, and pile-driving, and to also give consideration to ship-based noise, as appropriate. For each such activity, the working group will, inter alia, examine the management of the activities with regard to noise, summarize the assessments that have been made and indicate the main concerns, and identify or prepare guidelines or recommendations for best practice.[110]

G. Waste management

1. Disposal of wastes

197. The thirty-first meeting of the Scientific Group of London Convention and the second meeting of the Scientific Group of the London Protocol were held in May 2008. At those meetings, the Scientific Groups considered draft guidelines for the placement of artificial reefs and approved a new definition of "artificial reefs".[111] The draft guidelines will be further reviewed prior to their submission to the Contracting Parties to the London Convention and the London Protocol for their consideration in October 2008.[112] The Groups also approved draft revised specific guidelines for the assessment of inert, inorganic geological material for submission to the Contracting Parties in October 2008 (see LC/SG 31/16, paras. 3.10-3.15 and annex 5). Specific Guidelines developed under the London Convention and the London Protocol are regarded as very useful tools in assisting States in the control of marine dumping. It has been reported that providing countries with additional technical information could complement the current Specific Guidelines and assist in building technical capacity.[113]

198. The Scientific Groups noted that only 37 Contracting Parties had provided a report on their dumping activities for 2005, which was less than in previous years, and many Contracting Parties had not yet reported on their activities for 2006.[114] It was recalled that the Contracting Parties had urged all parties to provide the secretariat with the reports on their dumping activities. In order to improve reporting under the London Convention and the London Protocol, the Scientific Groups commenced a review of the reporting format for several regional conventions.[115] They also approved the Electronic Reporting Form (E-Form), but

[110] For the report of the meeting (31 March to 3 April 2008), see www.ascobans.org/index0502.html.

[111] Report of the meetings, LC/SG 31/16, paras. 5.1-5.14.

[112] The 30th Consultative Meeting of Contracting Parties to the London Convention and the 3rd Meeting of Contracting Parties to the London Protocol will be held in October 2008, in parallel with the 1st meeting of the London Protocol Compliance Group.

[113] Results of a survey. See LC/SG 31/16, paras. 3.23-3.30, and annex 7.

[114] Ibid., paras. 6.6-6.13.

[115] Ibid., paras. 6.3-6.5.

agreed to recommend a review of the Form once OSPAR had completed a review of its reporting format or earlier if and when deemed necessary.[116]

199. The Scientific Groups made progress on the "Barriers to compliance" project, which is aimed at capacity-building to remove known barriers and impediments to compliance with the London Convention and London Protocol. A strategic approach had been adopted to implement technical cooperation and assistance activities and help to prioritize support for States to overcome barriers that had been identified. The Scientific Groups approved a draft implementation plan that included activities that matched initial funding and in kind pledges already received, as well as proposed activities. It could be used by parties to identify activities that may be of particular interest, whether as a donor or a recipient, and it would form the basis for reporting to future sessions of the Scientific Groups and the Contracting Parties and form a benchmark for analysing the effectiveness of the overall project. It would be forwarded to the Contracting Parties for their consideration in October 2008.[117]

200. In this respect, the Scientific Groups also noted a number of national workshops that had been scheduled for the period 2008-2009 in Ecuador, Oman, the Philippines, and Thailand, which aimed, inter alia, to sensitize countries to the need for and implications of ratifying the London Protocol. A number of regional workshops had also been scheduled in Azerbaijan, Côte d'Ivoire, Ghana, Italy, and possibly Argentina, to generally promote the London Convention and the London Protocol and provide information on the overall legal framework for marine pollution management.[118]

201. The Scientific Groups also reviewed reports submitted by Contracting Parties on monitoring activities related to dumping operations, and reviewed the monitoring of marine litter and abandoned and lost fishing gear.[119] They also considered issues relating to coastal management and prevention of marine pollution. The Groups approved draft guidance on managing spoilt cargoes, which will be forwarded to the Contracting Parties for adoption in October 2008 and to MEPC at its fifty-eighth session, and approved draft guidance on best management practices for removal of tributyltin paints from ships, in light of the entry into force of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships on 17 September 2008.[120]

2. Transboundary movement of wastes

202. The ninth meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal was held in June 2008 (see UNEP/CHW.9/39). The Conference of the Parties decided, at this meeting, that the implementation of the Strategic Plan for the Implementation of the Basel Convention (to 2010) should continue until a new 10-year framework is adopted at its tenth meeting (see decision IX/3). It also reviewed the report of the Committee for Administering the Mechanism for Promoting Implementation and Compliance (Compliance Committee) and decided,

[116] Ibid., paras. 6.14-6.16.
[117] Ibid., paras. 7.1-7.14 and annex 9.
[118] Ibid., paras. 7.36-7.45.
[119] Ibid., paras. 8.1-8.21.
[120] Ibid., paras. 9.1-9.15 and annexes 10 and 11. See also MEPC 57/21, paras. 5.1, 5.7-5.8, 12.11-12.13.

inter alia, to enlarge the scope of the Trust Fund to Assist Developing Countries and Other Countries in Need of Technical Assistance in the Implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal to establish an implementation fund to assist, subject to the availability of resources, any Party that is a developing country or country with an economy in transition and is the subject of a submission made in accordance with paragraph 9 of its terms of reference.[121] The Conference of the Parties also authorized the Compliance Committee to recommend use of the implementation fund to assist Parties in the context of the facilitation procedure under paragraph 20 of its terms of reference, and to urge Parties to make contribution to such implementation fund (see decision IX/2).

203. The Conference of the Parties also took a number of decisions regarding, inter alia, strengthening further cooperation and coordination with other international, including regional organizations, and multilateral environmental agreements in areas of relevance to the Basel Convention, including cooperation between the Basel Convention and IMO (see also paras. 206-208 below); and facilitating national reporting (see decisions IX/11-13). The Conference of the Parties also, inter alia, called for stringent legislation on the control of transboundary movement of hazardous wastes and for the incorporation of appropriate penalties for illegal traffic of such wastes into national legislation (see decision IX/23); appealed for the expeditious ratification of the Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Protocol) (see decision IX/24; see also para. 215 below); requested Parties to provide information to the Secretariat on national definitions of hazardous waste (see decision IX/27); and called upon Parties to designate a competent authority and focal point for facilitating the implementation of the Basel Convention (see decision IX/29).

204. With respect to the *Probo Koala* incident,[122] a regional capacity-building programme for the monitoring and control of transboundary movements of hazardous wastes and toxic chemicals in the context of the implementation of the Basel Convention and other related multilateral environmental agreements in the Gulf of Guinea was implemented in June 2008. The main components of this programme, which is focused on assisting Côte d'Ivoire and other States in the region, include: (a) the development of a hazardous waste management plan for the district of Abidjan; (b) the strengthening of the capacity of the port of Abidjan to manage waste generated at sea in an environmentally sound manner; (c) the development of a regional capacity-building programme for the subregion; and (d) the development of a feasibility study for an early warning system.[123]

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[121] For the Compliance Committee's term of reference, see http://www.basel.int/legalmatters/compcommitee/index.html.

[122] A vessel named *Probo Koala* dumped thousands of tons of hazardous wastes around Abidjan area in an incident in 2006. See A/62/66, para. 293, A/62/66 Add. 1, paras. 205 and 206, and A/63/63, para. 307.

[123] UNEP/CHW.9/4, annex II. See also "Boost for hazardous waste management in Côte d'Ivoire", a UNEP Press Release of 16 June 2008, at http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=538&ArticleID=5836&l=en.

H. Ship breaking, dismantling, recycling and scrapping

205. The IMO Working Group on Ship Recycling has continued to further develop the draft text of the international convention for the safe and environmentally sound recycling of ships as noted by MEPC at its fifty-seventh meeting (see MEPC 57/3, annex 1). The new convention intends to provide regulations for the design, construction, operation and preparation of ships to facilitate safe and environmentally sound recycling, for the operation of ship recycling facilities in a safe and environmentally sound manner, and for the establishment of an enforcement mechanism. Among the issues discussed by MEPC were the definition of "ship", the compliance mechanism and the recycling of ships to which the convention applies in facilities located in States which are not party to the convention. The meeting instructed the Working Group to finalize the draft text of the convention, maintaining only party-to-party provisions. The draft is expected to be approved by MEPC at its next meeting in October 2008. An intersessional correspondence group was also instructed to prepare a draft conference resolution addressing the adequacy of recycling capacity, to be adopted by the diplomatic conference, scheduled to be held in May 2009. The associated draft Guidelines for Safe and Environmentally Sound Ship Recycling will be considered at the fifty-ninth session of the MEPC. The Committee also invited the Technical Cooperation Committee to work on national-level capacity-building (see MEPC 57/21).

206. The draft convention has relevance to the work undertaken in the context of other international instruments, in particular the Basel Convention and the ILO Guidelines on Safety and Health in Shipbreaking for Asian countries and Turkey. In this regard, the MEPC considered a number of documents from the Basel Convention secretariat, the ILO and the International Organization for Standardization (see MEPC 57/3/1, MEPC 57/3/2, MEPC 57/3/3, MEPC 57/3/4 and MEPC 57/3/4 and Add.1).

207. At its ninth meeting in June 2008, the Conference of the Parties to the Basel Convention adopted decision IX/30 on dismantling of ships (UNEP/CHW.9/39), which, inter alia, invites the IMO to continue to have due regard for the Basel Convention in wastes related to ship dismantling and to continue to incorporate clear responsibilities for all stakeholders. The Conference of the Parties also requests the Open-ended Working Group of the Basel Convention to carry out a preliminary assessment on whether the ship recycling convention establishes an equivalent level of control and enforcement to that of the Basel Convention and, in doing so, to take into account: the special characteristics of ships and international shipping, the principles of the Basel Convention and relevant decisions of the Conference of the Parties, and comments submitted by parties and other stakeholders. With regard to international cooperation and technical assistance activities on the environmentally sound management of ship dismantling, the Conference of the Parties underlines the importance of continued inter-agency cooperation between ILO, IMO and the Basel Convention, and requested the secretariat to further develop programmes for sustainable ship recycling, in conjunction with other bodies.

208. The third session of the Joint ILO/IMO/Basel Convention Working Group on Ship Scrapping will be held in October 2008.

I. Liability and compensation

209. The current international legal regime for liability and compensation for damage from pollution from ships and from the carriage of hazardous and noxious substances, hazardous wastes and nuclear material by sea is composed of a number of international instruments. The present section will provide information regarding recent developments relating to the following instruments: the 1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage, 1969 (1992 Civil Liability Convention); the 1992 Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971 (1992 International Oil Pollution Compensation Fund); the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunkers Convention); the Hazardous and Noxious Substances Convention; the Basel Protocol; and the Convention on Supplementary Compensation for Nuclear Damage.

210. *Bunkers Convention*. This Convention, which aims to ensure adequate, prompt, and effective compensation to persons suffering damage caused by spills of oil carried as fuel in ships' bunkers, will enter into force on 21 November 2008. The Convention applies to damage caused in the territory, including the territorial sea, and in EEZs of States parties and requires ships over 1,000 gross tonnage to maintain insurance or other financial security, such as the guarantee of a bank or similar financial institution, to cover the liability of the registered owner for pollution damage in an amount equal to the limits of liability under the applicable national or international limitation regime, but in all cases, not exceeding an amount calculated in accordance with the Convention on Limitation of Liability for Maritime Claims, 1976, as amended. Under the Convention, a claim for compensation can be brought directly against an insurer.

211. *International Oil Pollution Funds*. The Administrative Council of the 1992 Fund approved the draft Technical Guidelines for assessing fisheries sector claims for publication as a Fund document.[124] The 1992 Fund also continued to consider matters related to the *Erika* (France, 1999), *Prestige* (Spain, 2003), *Solar 1* (Philippines, 2006) and *Shosei Maru* (Japan, 2006) incidents. It started consideration of the *Volgoneft 139* (Strait of Kerch, 2007) and *Heibei Spirit* (Republic of Korea, 2007) incidents. Consideration of recent developments in the *Slops* (Greece, 2000) incident raised questions regarding the definition of "ships" under the 1992 Civil Liability Convention and Fund Convention. While the 1992 Fund Assembly had decided in October 1999 that offshore craft, namely floating storage units and floating production, storage and offloading units should be regarded as ships only when they carried cargo on a voyage to or from a port or terminal outside the oil field in which they normally operated (92FUND/A.4/32), the Greek courts ruled that the *Slops*, a floating oily waste reception and processing facility permanently anchored in the port of Piraeus, fell within the scope of the 1992 Conventions. Consequently, the Director of the Fund was requested to further examine the matter taking into account the policy implications and report to the Committee at its next meeting in October 2008.[125]

[124] Record of decisions of the fourth session of the Administrative Council, 92FUND/AC.4/ES.13/9.

[125] Record of decisions of the forty-first session of the Executive Committee, 92FUND/EXC.41/11.

212. With regard to the *Erika*, the Tribunal de Grande Instance de Paris, by a judgment dated 16 January 2008, held the classification society, along with the representative of the registered owner, the president of the management company, and the oil company criminally liable for the damage caused, in addition to recognizing their joint civil liability. The judgment further recognized the right of environmental protection organizations to claim compensation for material, moral and environmental damage caused to the collective interest which it is their purpose to protect. Concerns have been expressed regarding the potential implications of the judgment on the international compensation regime and the Fund, in particular as regards its interpretation of article III.4 of the 1992 Civil Liability Convention, which provides that no claims for compensation may be made against, inter alia, the servants or agents of the owner, the pilot or any other person who performs services for the ship, and any charterer, manager or operator of the ship. As a result, the secretariat of the Fund has undertaken to study those implications once the Court of Appeal has rendered its judgment in the case.[125] It can be noted that the Federal Court of first instance in New York, in a judgment of January 2008, reached a different conclusion as regards the interpretation of article III.4 of the Convention in proceedings engaged by the Spanish Government against the American Bureau of Shipping in the context of the *Prestige* incident.[126]

213. The fourth Intersessional Working Group on non-technical measures to promote quality shipping for carriage of oil by sea, which is expected to complete its work by October 2008, reached a number of conclusions on the issues it was mandated to address. In particular, in relation to common criteria for issuing Civil Liability Convention certificates, the Group considered that States should ensure that appropriate checks are in place and enforced when the insurer of a ship is not a member of the International Group of Pollution and Indemnity Clubs, and consider whether common procedures could be adopted by all States, in particular as regards the safety and quality of the ship. With regard to the impact of differentiated insurance rates and premiums on quality shipping, the Group concluded, based on the information provided by the International Group, that differentiation of insurance rates and premiums was not likely to lead to a significant improvement in the quality of transportation of oil in bulk by sea.[127]

214. *Hazardous and Noxious Substances Convention*. At its session in June 2008, the Administrative Council acting on behalf of the Assembly of the 1992 International Oil Pollution Compensation Fund approved the text of a draft Protocol to the Hazardous and Noxious Substances Convention (92FUND/A/ES.13/5/1 and 92FUND/AC.4/ES.13/9) for submission to the IMO Legal Committee with a view to convening a diplomatic conference. The draft Protocol aims to address a number of issues that have inhibited the entry into force of the Hazardous and Noxious Substances Convention, namely those related to contributions to the Liquefied Natural Gas account, the concept of receiver, and non-submission of contributing cargo reports. As regards contributions to that account, different views are still held as to whether the person liable for contributions should be the receiver or the titleholder. As a result, the Council welcomed the establishment of an informal correspondence group to develop a compromise proposal on this issue for submission to the IMO Legal Committee (92FUND/AC.4/ES.13/9). The Legal

[126] See Incidents involving the 1992 Fund — *Prestige*, 92FUND/EXC.40/5.

[127] Non-Technical Measures to Promote Quality Shipping for Carriage of Oil by Sea, Conclusions of the Working Group, 92FUND/WGR.4/14.

Committee is scheduled to consider the development of the draft Protocol at its ninety-fourth session in October 2008.

215. *Basel Protocol*. At the time of preparing the present report, eight States had ratified/acceded to the 1999 Basel Protocol, which is set to enter into force after the date of deposit of the twentieth instrument of ratification/acceptance, formal confirmation, approval or accession. At its ninth meeting, the Conference of the Parties to the Basel Convention, appealed to States to expedite their ratification/accession of the Basel Protocol to facilitate its entry into force and called upon Parties to continue to consult at the national and regional levels to overcome obstacles to such ratification, including in respect of the requirement for insurance, bonds or other financial guarantees under article 14 of the Basel Protocol.

216. *Liability for nuclear damage*. The International Expert Group on Nuclear Liability of IAEA promotes States' adherence to the international nuclear liability instruments. It also addresses possible gaps and ambiguities in the existing nuclear liability regime and identifies ways to bridge these gaps. At its eighth meeting in May 2008, the Expert Group reviewed its outreach activities, including the Regional Workshop on Liability for Nuclear Damage, held in Sun City, South Africa, in February 2008[128] and stated that efforts would be made to include the development of implementing national nuclear liability legislation in future workshops and some follow-up mechanism, for example, the provision of tailored bilateral assistance to countries that are contemplating the introduction of nuclear power programmes. The meeting expressed concern over the current alternatives proposed by EC to achieve a uniform EU regime on nuclear third party liability, especially the suggestion that the European Atomic Energy Community (Euratom) could adopt a separate directive on liability. The Expert Group encouraged EC to continue to look at all possible options, including those that would contribute to strengthening the global nuclear liability regime, such as the Convention on Supplementary Compensation for Nuclear Damage or the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention on Third Party Liability in the Field of Nuclear Energy (IAEA document 6C(52)/2, paras. 53-58).

217. Four States have ratified the Convention on Supplementary Compensation. The Convention is set to enter into force after ratification by at least five States who have a minimum of 400,000 units of installed nuclear capacity. Upon entry into force, the Convention will establish a uniform global legal regime for the compensation of victims in the event of a nuclear accident, including compensation for damage occurring within a State's EEZ, including loss of tourism or fisheries related income. The Convention is consistent with principles set forth in previous international agreements governing nuclear liability, including the Vienna Convention on Civil Liability for Nuclear Damage and the Paris Convention.[129]

[128] See Workshops on Legislative Assistance, at http://ola.iaea.org/OLA/whats_new/legislative%20assistance%20workshops.asp.

[129] The Convention on Supplementary Compensation for Nuclear Damage provides a bridge between the Vienna Convention regime and the Paris Convention regime and establishes an international fund to increase the amount available to compensate victims.

J. Area-based management tools

218. *Marine protected areas*. The Conference of the Parties to the Convention on Biological Diversity, at its ninth session, adopted scientific criteria for identifying ecologically or biologically significant marine areas in need of protection in open ocean waters and deep sea habitats. The criteria relate to: uniqueness or rarity; special importance for life history stages of species; importance for threatened, endangered or declining species and/or habitats; vulnerability, fragility, sensitivity, or slow recovery; biological productivity; biological diversity; and naturalness (decision IX/20, annex I). The Conference of the Parties also adopted scientific guidance for designing representative networks of MPAs, including in open ocean waters and deep sea habitats. The guidance sets out required network properties and components relating to: ecologically and biologically significant areas; representativity; connectivity; replicated ecological features; and adequate and viable sites (ibid., annex II). The Conference of the Parties also took note of the four initial steps to be considered in the development of representative networks of MPAs (ibid., annex III). It recognized that, in order to review the criteria in light of new scientific information, as well as experiences and results from their practical application, consideration should be given to the need to establish a mechanism for such a review at future meetings. The Conference of the Parties also decided to convene an expert workshop in order to provide scientific and technical guidance on the use and further development of biogeographic classification systems, and guidance on the identification of areas beyond national jurisdiction, which meet the scientific criteria. The role of indigenous and local communities in the future process was also highlighted. The Conference of the Parties called for collaboration on capacity development in developing countries as well as countries with economies in transition, for the application of the scientific criteria and the scientific guidance, and for the mitigation of the significant adverse impacts of human activities in marine areas.

219. Among activities at the regional level (see also paras. 231, 236, 238, 243 and 248 below), the ASEAN Centre for Biodiversity organized in July 2008 in cooperation with the Directorate General of Forest Protection and Nature Conservation of the Indonesian Ministry of Forestry, a regional workshop to draft guidelines for the effective management of terrestrial and marine transboundary protected areas (see www.aseanbiodiversity.org/ctmtpa/index.htm).

220. At the national level, on 28 January 2008, the Government of Kiribati announced the expansion of the boundaries of the Phoenix Islands Protected Area to encompass an area of 410,500 km^2, including most of Kiribati's EEZ (see www.phoenixislands.org/index.php).

221. *Preservation reference areas*. At the fourteenth session of the International Seabed Authority, the Legal and Technical Commission considered a proposal relating to criteria for the establishment of preservation reference zones in the Clarion-Clipperton Zone,[130] developed on the basis of a workshop held in October 2007 to design MPAs for seamounts and the abyssal nodule province in Pacific high

[130] See note 77, and Considerations relating to an economic assessment of the marine environment in the Area and the use of area-based management tools to conserve biodiversity, ISBA/14/LTC/5.

seas.[131] The Commission established a working group to consider all relevant issues with a view to formulating a complete proposal for consideration by the Legal and Technical Commission at its fifteenth session.[132]

222. *Fisheries closures and related measures*. On the basis of article 7 of the Basic Regulation of the Common Fisheries Policy, which empowers EC to take emergency measures if there is evidence of a serious threat to the conservation of living aquatic resources, EC put in place a closure for bluefin tuna fishery in the Atlantic Ocean, east of longitude 45°W, and in the Mediterranean Sea for purse seine fleets, with effect from 16 June 2008. The Regulation also prohibits EU operators from accepting landings, placing of bluefin tuna in cages for fattening or farming, and trans-shipments of bluefin tuna caught by purse seiners flying EU Member States or other States' flags (see Commission Regulation (EC) No. 530/2008).

223. *World heritage sites*. At its thirty-second session, the World Heritage Committee added several marine and coastal sites to the UNESCO World Heritage List, including the following: (a) the lagoons of New Caledonia in France, which feature an exceptional diversity of coral, fish species and habitats with the world's most diverse concentration of reef structures; (b) Surstey, a volcanic island off the coast of Iceland, which has been a source of information on the colonization process of new land by plant and animal life since its formation between 1963 to 1967; and (c) Socotra Archipelago in Yemen, which boasts unique diversity and endemism of plant and animal species (see http://whc.unesco.org/en/news/453).

224. *MARPOL Special Areas and Particularly Sensitive Sea Areas*. As a result of a 10-year regional project on the implementation of MARPOL 73/78, organized and administered by the Regional Organization for the Protection of the Marine Environment/Marine Emergency Mutual Aid Centre, with support from the IMO Integrated Technical Cooperation Programme, all the States in the "Gulfs area"[133] have now ratified MARPOL 73/78 and have provided adequate reception and treatment facilities for annex I and annex V ship-generated wastes. Accordingly, the Special Area status has taken effect in the "Gulfs area" on 1 August 2008, as decided by MEPC at its fifty-sixth session (see A/62/66/Add.1, para. 215 (see http://www.imo.org/Newsroom/mainframe.asp?topic_id=1709&doc_id=9919)). The Southern South African waters Special Area under annex I also took effect on 1 August 2008.

225. Similarly, in the Mediterranean Sea, following the provision of adequate reception facilities in all major ports by bordering States, the discharge requirements for the Special Area under MARPOL annex V will take effect on 1 May 2009, as decided by MEPC at its fifty-seventh session. Consequently, for all ships, as from 1 May 2009, disposal into the Mediterranean Sea of the following is prohibited: all

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[131] Rationale and recommendations for the establishment of preservation reference areas for nodule mining in the Clarion-Clipperton Zone, ISBA/14/LTC/2, and www.soest.hawaii.edu/oceanography/faculty/csmith/MPA_webpage/MPAindex.html.

[132] Summary report of the Chairman of the Legal and Technical Commission on the work of the Commission during the fourteenth session, ISBA/14/C/8.

[133] According to MARPOL 73/78, the "Gulf Area" means the sea area north-west of the rhumb line between Ras al Hadd (22°30′N, 059°48′E) and Ras al Fasteh (25°04′N, 061°25′E). The "Gulfs area" was established as a Special Area in 1973, but the discharge requirements therein could not take effect until States in the area had ratified the Convention and provided adequate reception facilities.

plastics, including but not limited to synthetic ropes, synthetic fishing nets and plastic garbage bags; and all other garbage, including paper products, rags, glass metal, bottles, crockery, dunnage, lining and packing materials. In the meantime, MEPC encouraged member Governments and industry groups to comply immediately, on a voluntary basis, with the Special Area requirements (resolution MEPC.172(57)).

226. Following the adoption of the necessary associated protective measures by MSC (see A/63/63, para. 317), MEPC, at its fifty-seventh session, formally designated the Papahānaumokuākea Marine National Monument in the north-western Hawaiian Islands as a particularly sensitive sea area. The particularly sensitive sea area will protect a unique, fragile and integrated coral reef ecosystem consisting of an approximately 1,200-mile stretch of small islands, atolls, banks, seamounts, pinnacles, shoals and other emergent features. The associated protective measures include amendments to the six existing areas to be avoided, the adoption of additional areas to be avoided as well as a ship-reporting system (resolution MEPC.171(57); see also para. 63 above).

227. In relation to the Galapagos Archipelago particularly sensitive sea area and as adopted by MSC at its eighty-third session (MSC 83/28, para. 14.4), two new recommended tracks as a condition of port entry through the Galapagos area to be avoided took effect on 1 May 2008 (MEPC 57/21, para. 7.5).

K. Regional cooperation

228. The present section provides information on recent developments in a number of regional seas, including those under the UNEP Regional Seas Programme, as well as relevant activities undertaken by regional entities. Regional developments relating to specific topics are also presented in chapters VIII, IX and in sections B, E, F, J and L of the present chapter.

229. During the reporting period, UNEP has continued to promote ecosystem approaches (see paras. 157 and 160 above). In addition, a number of activities on the management of marine litter have been implemented in various regional seas in the context of the UNEP Global Initiative on Marine Litter. The UNEP/IOC Operational Guidelines on Survey and Monitoring of Marine Litter, which have recently been developed, will assist States, regional seas organizations and other relevant organizations to address the problem of monitoring and assessment of marine litter.[134]

1. Antarctic

230. Participants at the thirty-first Antarctic Treaty Consultative Meeting in June 2008, inter alia, discussed the work of the Committee for Environmental Protection, the implementation of Decision 1 (2005) on liability, safety and operations in Antarctica, the International Polar Year 2007-2008, tourism and non-governmental activities in the Antarctic Treaty area, inspections under the Treaty and the 1991

[134] UNEP/IOC Technical Working Group Workshop for the development of UNEP/IOC Operational Guidelines on Survey and Monitoring of Marine Litter, held in May 2008. The workshop was co-organized by the UNEP-Regional Seas Programme and UNESCO/IOC and hosted by the UNEP Coordinating Body on the Seas of East Asia Secretariat.

Protocol on Environmental Protection to the Antarctic Treaty, scientific issues and biological prospecting in Antarctica.

231. The meeting adopted, inter alia, 14 new or revised measures on Specially Protected or Specially Managed Areas, a resolution adding four visitor sites to the list of areas subject to Site Guidelines, a checklist to assist in the inspection of Specially Protected or Specially Managed Areas, a resolution on improving hydrographic surveying and charting to support the safety of navigation and environmental protection in the Antarctic region, and a resolution on enhancing the role of Maritime Rescue Coordination Centres with Search and Rescue Regions. The meeting also invited the Scientific Committee on Antarctic Research to prepare a paper on biological prospecting for its next meeting, which would review the most recent published research that may involve biological prospecting in the Antarctic Treaty region and provide an assessment of these efforts from discovery to development to commercialization to product use, based on fundamental scientific principles, and provide a survey of ongoing biological prospecting research being undertaken within the Scientific Committee on Antarctic Research community.[135]

2. Arctic

232. The meeting of Senior Arctic Officials of the Arctic Council, held in April 2008, approved the Snow, Water, Ice and Permafrost in the Arctic project, which will assess changes in the Arctic cryosphere and also endorsed work to assess the influence of non-CO_2 drivers on climate change in the Arctic. The Arctic Council is also continuing its work on the Arctic Marine Shipping Assessment and on Best Practices in Ecosystems-based Oceans Management in the Arctic project (http://arctic-council.org/article/2008/4/successful_sao_meeting).

233. A decision on the sustainable development of the Arctic region was adopted by the UNEP Governing Council and Global Ministerial Environment Forum at its meeting in February 2008, which inter alia, (a) commended the work of the Arctic Council; (b) encouraged UNEP to cooperate with the Arctic Council and other relevant bodies and multilateral environmental agreements; (c) urged relevant stakeholders to continue to apply a precautionary approach and to conduct environmental impact assessments; (d) requested relevant stakeholders to enhance the scientific basis for informed decision-making in the Arctic; (e) encouraged UNEP and other relevant organizations and programmes to seek means to sustain and enhance Arctic observing networks beyond the International Polar Year research phase; and (f) requested Governments of Arctic States and other interested stakeholders to expedite the implementation of appropriate measures to facilitate adaptation to climate change at all levels (UNEP/GCSS.X/10, decision SS.X/2).

3. Baltic

234. The HELCOM Baltic Sea Action Plan Implementation Group, which was established by the HELCOM Ministerial Meeting to steer on a high level the process of implementation of the HELCOM Baltic Sea Action Plan to meet ecological objectives and achieve good ecological/environmental status of the Baltic Sea by 2021, held its first and second meetings in April and June 2008. Besides progress in implementation of the Plan by contracting States, the Group also paid particular

[135] Final report of the Consultative Meeting, at: www.ats.aq/devAS/info_finalrep.aspx?lang=e.

attention to the eutrophication segment of the Plan in relation to which it identified a number of activities to be carried out.[136] HELCOM is also currently carrying out a project on broad-scale marine spatial planning, with the main aim of developing common principles for the region and an interactive web-based tool to support Baltic Sea States in planning activities, with emphasis on the need to heed the natural environment in the planning process.

235. HELCOM also adopted a number of recommendations, including on marine litter in the Baltic Sea region, which, inter alia, recommends that HELCOM Contracting Parties recognize a unified method for sampling and reporting marine litter found on beaches, support monitoring activities and beach clean-up campaigns and raise public awareness of the negative effects of marine litter on coastal and marine ecosystems.[137]

236. With regard to its network of Baltic Sea Protected Areas, the Baltic Sea States intend to designate all their protected areas under the EU Habitats and Bird Directives as protected areas and to produce and implement management plans for all the Baltic Sea Protected Areas. Several countries are working on identifying protected areas in their EEZs. One of the aims of HELCOM is to enhance mapping of benthic habitats in the Baltic Sea, which is critical for assessing the ecological coherence of the network.[79]

4. East Asian Seas

237. The need for capacity-building, improved port waste reception facilities and effective implementation of oil spill contingency plans and compensation claims were highlighted by the Forum on Marine Pollution related multilateral environmental agreements organized by the Coordinating Body on the Seas of East Asia in June 2008.[138] The Forum focused on five instruments, namely MARPOL 73/78, the International Convention on Oil Pollution Preparedness, Response and Cooperation, the London Convention, the Ballast Water Management Convention and GPA.

5. Mediterranean Sea

238. To achieve several of the commitments in the Almeria Declaration (see A/63/63, para. 338), as well as implement the Global Strategic Directions for the Regional Seas Programme 2008-2012, an information compilation process on vulnerability and impacts of climate change in coastal and marine ecosystems is ongoing. Furthermore, an initiative was launched for the creation of high seas Mediterranean Protected Areas under the Protocols to the Barcelona Convention on Mediterranean Specially Protected Areas, and on Specially Protected Areas and

[136] The Implementation Group held meetings in April and June 2008. See Minutes of the first and second meetings at http://meeting.helcom.fi/web/bsap/3.

[137] HELCOM Recommendation No. 29/2 on marine litter in the Baltic Sea region, adopted on 6 March 2008, addresses harmonization of methods of sampling and reporting the amount and type of marine litter on the beach.

[138] The forum was held in June 2008, see http://www.cobsea.org/events_upcoming.html#MEAforum. The report for this forum was still unavailable at the time of preparation of the present report.

Biological Diversity in the Mediterranean. The initiative is expected to extend up to 2011.[139]

239. The 1996 Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources and Activities to the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona Convention), which replaces the 1980 Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources, entered into force on 11 May 2008.

240. UNEP/Mediterranean Action Plan is moving from the classic approach to environmental protection based on pollution prevention and control to a more holistic approach towards sustainable consumption and production in order to better adapt its objectives to the need for sustainable development in the Mediterranean region. One of its units, the Regional Activity Centre for Cleaner Production, working on sustainable production, has launched a Work Programme on Sustainable Consumption and Production that has been approved by the Contracting Parties of the Barcelona Convention and is also aiming to bring MAP closer to the Marrakech Process on sustainable consumption and production.

241. The de-pollution of the Mediterranean and the creation of maritime and land highways in the Mediterranean region were also among the key initiatives agreed upon for future work to be carried out by the future secretariat of the Union for the Mediterranean.[140]

6. North-East Atlantic

242. In the first half of 2008, the States parties to the Convention for the Protection of the Marine Environment of the North-East Atlantic, continued to take measures to assess and improve the environmental status of the body of water covered thereunder. A revised OSPAR List of Threatened and/or Declining Species and Habitats was issued, adding a number of species and two new habitats. Work is also ongoing for the preparation of the 2010 Quality Status Report — a comprehensive report on the quality of the marine environment for the whole of the North-East Atlantic.[141] The implementation of the European Maritime Strategy and the Integrated Maritime Policy for the EU within the OSPAR area continued to be a topic of discussion among OSPAR States Parties, since not all are members of the EU.[141]

243. The protection of the marine environment in areas beyond national jurisdiction also remains a concern of the OSPAR Commission. At its meeting in June 2008, OSPAR adopted a Code of Conduct for Responsible Marine Research in the Deep Seas and High Seas of the OSPAR Maritime Area (see para. 107 above). It also agreed in principle to designate the Charlie Gibbs Fracture Zone a potential MPA in areas beyond national jurisdiction as a component of the OSPAR network of MPAs, and defined a general "road map" setting out the steps to be taken with a view to considering for possible adoption MPAs in areas beyond national jurisdiction at the 2010 OSPAR Ministerial Meeting. Intersessionally, it aims to prepare a document addressing: the competence of OSPAR to establish MPAs in areas beyond national

[139] For recent developments relating to the Mediterranean Special Area under MARPOL 73/78, see para. 225 above.

[140] See note 47 above.

[141] Summary record of the Meeting of the OSPAR Commission, OSPAR 08/24/1-E.

jurisdiction and adopting corresponding measures; the legal competence of other international organizations to contribute to protection by OSPAR of biodiversity and ecosystems in areas beyond national jurisdiction in the OSPAR maritime area; the legal aspects of the interplay between OSPAR competences and rights and obligations conferred under UNCLOS and customary international law to non-OSPAR contracting parties, including the possibilities of managing activities in an OSPAR MPA in areas beyond national jurisdiction within the OSPAR maritime area; procedural options for designating OSPAR MPAs in areas beyond national jurisdiction; and a list of specific questions on issues to be identified by the Intersessional Correspondence Group on MPAs.[141]

7. North-West Pacific

244. All four North-West Pacific Action Plan Regional Activity Centres have agreed on new projects for the 2008-2009 biennium (see NOWPAP Highlights at http://www.nowpap.org/news/news.php). The new projects include: (a) carrying out case studies on harmful algal blooms, the development of an integrated website on harmful algal blooms and procedures for assessing coastal eutrophication; (b) integrating hazardous and noxious substances into the existing North-West Pacific Action Plan Regional Oil Spill Contingency Plan and the respective development of hazardous and noxious substance response operations guidelines, training manual and database; and (c) carrying out activities related to integrated coastal and river basin management with the involvement of all North-West Pacific Action Plan Regional Activity Centres and in cooperation with partners, such as the Partnerships in Environmental Management for the Seas of East Asia, organize a workshop during the 2009 East Asian Seas Congress (ibid.). In order to address the global concern over the issue of marine litter, the North-West Pacific Action Plan also started the implementation of its Regional Action Plan on Marine Litter in 2008.

8. Pacific

245. The Secretariat of the Pacific Regional Environment Programme has organized a number of activities to coordinate the approach of its Member States in connection with various multilateral environmental agreements. During a preparatory meeting of parties to the Ramsar Convention on Wetlands from the Oceania region,[142] the reliance of Pacific communities on wetlands for their cultural and physical well-being and the relationship between healthy wetlands and healthy communities in the Oceania region were recognized.[143] The Secretariat of the Pacific Regional Environment Programme also organized a second meeting of the Scientific and Technical Advisory Committee of the Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention) to assist Parties to coordinate the scientific, technical and legal implementation of the Convention for consideration and adoption by the Meeting of the Conference of the Parties to the Waigani

[142] See Report of the Fourth Oceania Regional Meeting for the tenth meeting of the Conference of the Parties to the Ramsar Convention on Wetlands, held in April 2008.

[143] Secretariat of the Pacific Regional Environment Programme Press Release, at http://www.ramsar.org/mtg/mtg_reg_oceania_2008_press.htm.

Convention,[144] as well as a meeting of Pacific delegations to develop a unified strategy in preparation for the ninth meeting of the Conference of the Parties to the Convention on Biological Diversity.

9. Red Sea and Gulf of Aden

246. At the eleventh meeting of the Ministerial Council of the Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden,[145] Member States assessed the implementation of the Regional Organization's programmes and activities and approved a new workplan, which puts more emphasis on on-the-ground activities and capacity-building. The Council also adopted decisions in support of national efforts including the establishment of pollution emergency and preparedness centres. The Council also approved enhancing the regional mechanism and efforts to accelerate the designation of the Red Sea and Gulf of Aden as "Special Areas" under MARPOL 73/78, annexes I and V.

10. Western Africa

247. The first extraordinary Meeting of the Contracting Parties to the Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention) was held in June 2008 with the aim of revitalizing the Convention (see UNEP(DEPI)/WAF/SS.1/WD3), including through the enhancement of institutional arrangements and collaboration; the promotion of ratifications/accessions to the Convention; and the review of the mandate and objectives of the Convention.[146] As part of the preparations for the Special Conference for the revitalization of the Convention, UNEP in close consultation with the LME Commissions and other relevant stakeholders in the Convention area, reviewed the original mandate and objectives of the Convention in order to provide options for suitable institutional arrangements for regional and subregional coordination and enhancing contributions to the Regional Trust Fund for the Implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region.[147] Strategies for encouraging ratifications of the Convention and an action plan for transferring the functions of the Secretariat from Nairobi to Abidjan with details of human, infrastructure and financial needs were also prepared (see www.unep.org/AbidjanConvention/COP_9/index.asp).

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[144] "SPREP highlights for April 2008", available from http://www.sprep.org/documents/highlights/2008-apr-Highlights.pdf.

[145] Held on 28 February 2008. See http://www.persga.org/UI/English/Event.aspx?ContentId=188&EventId=17.

[146] Report of the First Meeting of the Bureau to the Abidjan Convention held on 10 May 2008. UNEP(DEPI)/WAF/BUR.1. At the time of the preparation of the present report, the final report of the meeting was not yet available.

[147] Report of the Stakeholders meeting on the Revitalization of the Abidjan Convention, April 2008 (UNEP(DEPI)/WAF/FPF), at www.unep.org/AbidjanConvention/docs/Abidjan%20Convention%20Summary%20Report%20of%20the%20Stakeholders%20meeting%20on%20revitilization%20of%20the%20Convention%2024%20May%202008-%20erg.pdf.

11. Wider Caribbean

248. The Scientific and Technical Advisory Committee to the Protocol to the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention) concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region recently reviewed the draft Action Plan for the Conservation of Marine Mammals in the Wider Caribbean Region and considered further action on critical issues related to the biodiversity of the Wider Caribbean as well as ways to achieve wider collaboration with relevant partners to assist with the implementation of the Protocol.[148] The meeting of the Scientific and Technical Advisory Committee was preceded on 1 July 2008 by a meeting of experts of the Protocol Contracting Parties to finalize the guidelines and criteria for the listing of protected areas under the Protocol.

249. Marine litter continues to pose a severe threat to the Caribbean region. The problem is evidenced through the entanglement and death of marine species, increasing human health impacts from congested waterways and recreational areas, and negative economic impacts on fisheries and tourism, in particular following natural disasters. Despite various efforts undertaken at the national and community levels, the problem continues to grow at an alarming rate. During 1989-2005, marine litter data were compiled using data from International Coastal Cleanup activities in 28 countries of the wider Caribbean region. A total of 6,781,537 debris items were removed from shoreline and underwater sites dominated by caps and lids, plastic utensils and bags. The majority of these items are from land-based sources — an estimated 89.1 per cent — while the remainder are from sea-based sources. In response to this problem, the 2008 International Coastal Cleanup Conference was held in April 2008 in Jamaica.[149]

250. The Protocol on Pollution from Land-based Sources and Activities to the Cartagena Convention will enter into force on the thirtieth day following the date of deposit of the ninth instrument of ratification, acceptance or approval of, or accession. To date, four States have signed the Protocol.[150]

12. Other regional organizations

251. *Association of Caribbean States*. At its seventh meeting in July 2008, the Caribbean Sea Commission agreed on an institutional framework to carry out its work (see A/63/63, paras. 350-352), as well as on a number of activities towards the convening of a conference of oceans and law of the sea experts. That conference is expected to design a legal regime for the operation and implementation of the declaration of the Caribbean Sea as a special area in the context of sustainable development. The final document of the conference would then be presented to the Ministerial Council of the Association for adoption and further transmission to a special summit of Head of States or Government of the Association. For other developments, see paragraph 257 above.

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[148] The Fourth Meeting of the Scientific and Technical Advisory Committee to the Protocol was held in July 2008.

[149] See www.cep.unep.org/newsandevents/news/2008/unep-tackling-marine-litter-in-the-caribbean-1.

[150] See www.cep.unep.org/newsandevents/news/2008/saint-lucia-joins-regional-efforts-to-protect-caribbean-sea-from-pollution.

252. *European Union*. The European Union is continuing to take measures to implement its Integrated Maritime Policy, as reflected in the context of the Directive establishing a Framework for Community Action in the Field of Marine Environmental Policy (Marine Strategy Framework Directive), adopted in its final form by the European Parliament and the Council on 17 June 2008.[151] According to the Directive, European Union countries must "take the necessary measures to achieve good environmental status" by 2020. To that end, European Union member States will have to assess the environmental status of their marine waters by 2012, and develop a programme of measures to achieve good environmental status by 2015. Member States have two years to transpose the Directive following its entry into force.[152] In its Guidelines for an Integrated Approach to Maritime Policy: Towards best practice in integrated maritime governance and stakeholder consultation, adopted on 26 June 2008, the European Commission proposed to Member States that they should adopt an integrated approach in their domestic laws, so as to better preserve the marine environment and utilize the potential resources of the oceans and seas in an optimized fashion. The new guidelines provide that national integrated maritime policies should all be guided by the principle of subsidiarity, follow an ecosystem-based approach and take account of the needs and know-how of stakeholders, in particular in coastal regions (see http://ec.europa.eu/maritimeaffairs/press/press_rel270608_en.html). In addition, an EU Conference on the topic "Integrated maritime policy and the Mediterranean" was held in Slovenia on 10 June 2008, with a view to increasing the involvement of both European Union member and non-member States, in the discussion on the importance and impact of an integrated maritime policy on the Mediterranean area (see http://ec.europa.eu/maritimeaffairs)

L. Small island developing States

253. Small island developing States share similar sustainable development challenges, including small population, lack of resources, remoteness, susceptibility to natural disasters and excessive dependence on international trade. They also suffer from high transportation and communication costs (see http://www.sidsnet.org/2.html). Coastal erosion, coral bleaching, and sea-level rise, which are all exacerbated by climate change (see paras. 259-261 and 266), increase the vulnerability of small island developing States by impacting them both physically and economically, thereby hampering their sustainable development.[153] Efforts towards identifying and implementing suitable climate change mitigation and adaptation strategies and supporting the sustainable development of small island developing States continue at the global and regional levels as outlined below.

254. Meeting on the themes of agriculture, rural development, land, drought, desertification, and Africa, the Commission on Sustainable Development, at its sixteenth session in May 2008, also reviewed the implementation of the Mauritius Strategy for the Further Implementation of the Programme of Action for the

[151] Directive 2008/56/EC of the Parliament and of the Council, at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:164:0019:0040:EN:PDF.

[152] See www.rics.org/Practiceareas/Environmentandland/Ruralandnaturalassets/Marine/marinestrategy_n_170608.html.

[153] See *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II from the fourth Assessment Report of the IPCC* (Cambridge University Press, 2007).

Sustainable Development of Small Island Developing States. It expressed concern at the slow rate of implementation of the Barbados Programme of Action and the Mauritius Strategy. While some progress had been made at the national and regional levels in building the necessary institutional capacity, in formulating strategies and action plans, and in carrying out policy reforms, the Commission noted that many small island developing States continued to encounter constraints, including limited technical, financial and human resources. In undertaking an integrated review of the thematic issues of the session in respect of small island developing States, delegations stressed the vulnerability of small island developing States, which was exacerbated by the effects of climate change. The need for effective land use strategies to address the increasing pressure on limited resources including through strengthened human resource and institutional capacity, watershed, coastal zone and land use change management was considered. The sustainable management of fisheries, among others, was considered important to improving food security in small island developing States, as was the need to develop sustainable tourism to provide opportunities for income generation for rural communities. The need for economic diversification was also emphasized. During the high-level segment, it was further noted that small island developing States are at the frontline in responding to climate change and share in the responsibility for developing the necessary solutions.[154]

255. The Subsidiary Body for Scientific and Technological Advice of the United Nations Framework Convention on Climate Change (UNFCCC), at its twenty-eighth session, in June 2008, agreed to a number of activities for the second phase of the Nairobi work programme on impacts, vulnerability and adaptation to climate change up to the end of 2010.[155] The Nairobi work programme is a five-year programme covering the period 2005-2010 designed to assist UNFCCC parties, in particular developing countries, including the least developed countries and small island developing States, to improve their understanding and assessment of the impacts of, vulnerability and adaptation to climate change, and make decisions on adaptation actions and measures on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability (decision 2/CP.11, FCCC/CP/2005/5/Add.1). A number of expert meetings have been held on various areas of work under the Nairobi work programme during the reporting period, including on: adaptation planning and practices (September 2007, Italy); methods and tools and data and observations (March 2008, Mexico); socio-economic information to address ways and means to improve the integration of socio-economic information into impact and vulnerability assessments (March 2008, Trinidad and Tobago); and technologies for adaptation to climate change (April 2008, Thailand) (see respectively, FCCC/SBSTA/2007/15, FCCC/SBSTA/2008/3, FCCC/SBSTA/2008/2, and FCCC/SBSTA/2008/4, at http://unfccc.int/2860.php).

256. At the regional level, at the thirty-eighth Pacific Islands Forum, held in October 2007, Pacific Island leaders adopted a number of decisions to advance implementation of the Pacific Plan, endorsed by Forum leaders in October 2005 as a framework for greater regional cooperation and integration to progress development across the region (see http://www.pacificplan.org/). In particular, further actions

[154] See *Official Records of the Economic and Social Council, 2008, Supplement No. 9* (E/2008/29-E/CN.17/2008/17), chap. II.D, Chairperson's summary.

[155] Nairobi work programme on impacts, vulnerability and adaptation to climate change: revised draft conclusions proposed by the Chair, FCCC/SBSTA/2008/L.13/Rev.1.

were agreed to in respect of fisheries (see also para. 127) and climate change (see Forum Communiqué (PIFS (07) 12), annex A).

257. Work continued in the context of the Association of Caribbean States to implement General Assembly resolution 61/197, in particular in the areas of sustainable tourism, disaster reduction and the work of the Caribbean Sea Commission (see para. 251 above). In particular, the High-Level Conference on Disaster Reduction of the Association of Caribbean States in November 2007 adopted the Saint-Marc Plan of Action to guide the work of the Association in this area over the next five years.[156] The Plan of Action was endorsed by the Association of Caribbean States Ministerial Council at its thirteenth meeting on 25 January 2008.

258. A High-level Roundtable on International Cooperation for Sustainable Development in Caribbean Small Island Developing States was convened in March 2008, in response to a request by the Government of Iceland for the Department of Economic and Social Affairs of the Secretariat to facilitate enhanced development cooperation between Iceland and the Caribbean small island developing States. The meeting identified areas of mutual interest to increase cooperation, including in the areas of sustainable use of natural resources, climate change, renewable energy resources, fisheries management and capacity-building.[157]

XI. Climate change and oceans

A. Impacts of climate change on the oceans

259. Climate change continues to have a significant impact on the oceans and the lives of people that depend on the sea. Observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level conclusively indicate that the world is already warming in response to past greenhouse gas emissions, and are evidence of a warmer world in the future.[158]

260. It is expected that coastal areas will be exposed to increasing risks owing to climate change, including changes in sea surface temperature, sea level rise, erosion, ocean acidification, saltwater intrusion, and increased frequency of extreme weather events. Climate change is also modifying the distribution of marine and freshwater species, which are generally being displaced towards the poles and experiencing changes in the size and productivity of their habitats. Ecosystem productivity will likely be reduced in most tropical and subtropical oceans, seas and lakes and increased in high latitudes. Increased temperatures will affect fish physiological

[156] Document ACS/2007/NAT.DIS.HL.CONF/WP.001, at www.acs-aec.org/Disasters/CANREDES_EN.htm.

[157] For more information, see www.un.org/esa/sustdev/sids/2008_roundtable/presentation/conclusion.pdf.

[158] Gateway to the UN System's Work on Climate Change, Background information, available from http://www.un.org/climatechange/bg.shtml. Some scientists have warned that the Arctic may be free of summer ice by 2013. See, for example, "Meltdown in the Arctic is speeding up", available from http://www.guardian.co.uk/environment/2008/aug/10/climatechange.arctic.

processes, resulting in both positive and negative effects on fisheries and aquaculture systems.[159]

261. Climate change is already affecting the seasonality of particular biological processes, radically altering marine and freshwater food webs, with unpredictable consequences for fish production. Differential warming between land and oceans and between polar and tropical regions will affect the intensity, frequency and seasonality of climate patterns (e.g. El Niño) and extreme events (e.g. floods, droughts, storms), and thus impact the stability of marine and freshwater resources adapted to or affected by these patterns and events. Sea level rise, glacier melting, ocean acidification and changes in precipitation, groundwater and river flows will significantly affect coral reefs, wetlands, rivers, lakes and estuaries.[159]

262. The General Assembly has expressed its serious concern over the current and projected adverse effects of anthropogenic and natural climate change on the marine environment and marine biodiversity. It has also expressed its deep concern over the vulnerability of the environment and the fragile ecosystems of the polar regions, including the Arctic Ocean and the Arctic ice cap, particularly affected by the projected adverse effects of climate change (see General Assembly resolution 62/215, preamble).

263. The General Assembly has encouraged States to urgently pursue further research on ocean acidification, especially programmes of observation and measurement, and it has encouraged States, individually or in collaboration with relevant international organizations and bodies, to enhance their scientific activity to better understand the effects of climate change on the marine environment and marine biodiversity and develop ways and means of adaptation (ibid., paras. 81-82). It has also stressed the importance of increasing the scientific understanding of the oceans/atmosphere interface, including through participation in ocean observing programmes and GISs (ibid., para. 124).

B. Mitigating the impact of climate change and adapting to projected climate change

264. There is an urgent need for mitigation measures to limit and minimize the impact of climate change in the context of ocean-related activities. Negotiations are currently taking place on the framework for addressing climate change after 2012, when the first commitment period under the Kyoto Protocol expires.[160] The General Assembly has also called upon States to enhance their efforts to reduce the emission of greenhouse gases, in accordance with the principles contained in the United Nations Framework Convention on Climate Change, in order to reduce and tackle projected adverse effects of climate change on the marine environment and marine biodiversity (ibid., para. 83).

265. As described in section C below, the international community is currently taking action to mitigate the impact of climate change in the context of ocean-

[159] FAO, Report of the FAO Expert Workshop On Climate Change Implications for Fisheries and Aquaculture, Rome, 7-9 April 2008, FAO Fisheries Report No. 870 (FIEL/R870 (En)).

[160] For additional details, see http://unfccc.int/2860.php; see also A/63/63, paras. 360-361, and A/62/66/Add.1, paras. 236-238.

related activities. Numerous efforts are also being made at regional, national and local levels to reduce greenhouse gas emissions.

266. Adaptation measures are also needed in coastal areas to respond to climate change. Densely populated and low-lying areas where adaptive capacity is relatively low, including small island developing States, are especially at risk, particularly in areas that already face other challenges and human-induced pressures. Some small island communities are already being displaced owing to rising sea levels.[161] Climate change will also have potentially significant impacts on the four dimensions of food security: availability, stability, access and utilization.[162]

267. There are a wide array of adaptation options available, but more extensive adaptation than is currently occurring is required to reduce vulnerability to climate change. Making development more sustainable can enhance mitigative and adaptive capacities, and reduce vulnerability, but there may be barriers to implementation. On the other hand, it is very likely that climate change could slow the pace of progress towards sustainable development, and impede achievement of the Millennium Development Goals[163] and the oceans-related goals of the World Summit on Sustainable Development (see para. 163 above).

268. In the context of fisheries, climate change is a compounding threat to the sustainability of capture fisheries and aquaculture development.[162] Although some communities and fishery management systems have already adapted to climate-driven fluctuations, there are doubts that, with other pressures on natural resources and on community function, existing adaptive capacity will be sufficient to respond to additional vulnerability resulting from global climate change.[164] Reducing the vulnerability of fishing communities more generally can enhance adaptive capacity to a range of shocks, including from climate variability and extreme events.

269. Adaptation thus involves supporting measures to reduce the exposure of fishing people to climate-related risks, reducing dependence of peoples' livelihoods on climate-sensitive resources, and supporting people's capacity to anticipate and cope with climate-related changes.[164] Adaptation strategies need to be context and location specific and consider both short-term impacts (e.g. increased frequency of severe events) and long-term impacts (e.g. reduced productivity of aquatic ecosystems).[162]

270. Adaptation will also require and benefit from stronger capacity-building, education, and targeted initiatives.[162] The High-Level Conference on World Food Security: the Challenges of Climate Change and Bioenergy, held in June 2008, inter alia, urged Governments to assign appropriate priority to the agriculture, forestry

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[161] A recent study from the World Bank assessed the consequences of continued sea level rise for 84 developing countries. It indicated that tens of millions of people in the developing world could be displaced by sea level rise within this century, and that the accompanying economic and ecological damage would be severe. See, "The impact of sea level rise on developing countries: a comparative analysis", at http://www.worldbank.org. Also see, "Climate change refugees the forgotten people", available at http://www.theage.com.au/opinion/climate-change-refugees-the-forgotten-people-20080617-2s5b.html.

[162] See note 159.

[163] IPCC document, "Climate change 2007: synthesis Report, summary for policymakers".

[164] FAO, Building Adaptive Capacity to Climate Change: Policies to Sustain Livelihoods and Fisheries, New Directions in Fisheries-A Series of Policy Briefs on Development Issues, No. 08 (Rome, 2007).

and fisheries sectors, in order to create opportunities to enable the world's smallholder farmers and fishers, including indigenous people, in particular in vulnerable areas, to participate in, and benefit from financial mechanisms and investment flows to support climate change adaptation, mitigation and technology development, transfer and dissemination.[165]

C. Measures to reduce greenhouse gases in the context of ocean-related activities

1. Reduction of greenhouse gas emissions from ships

271. Reducing greenhouse gas emissions from ships has become a significant priority for the international community.[166] The Secretary-General of the International Maritime Organization has underlined the importance and urgency of limiting and controlling greenhouse gas emissions from all sources, and the need for IMO to act in concert with wider international efforts seeking the development and adoption of a global agreement by December 2009 and the coming into force of the new regime by 2012 (MEPC 57/21, paras. 4.65 and 4.99).

272. At its fifty-seventh session, MEPC considered follow-up actions to resolution A.963(23) on "IMO policies and practices related to the reduction of greenhouse gas emissions from ships", and progress made in connection with the "Work plan to identify and develop the mechanisms needed to achieve the limitation or reduction of CO_2 emissions from international shipping", which was adopted by the MEPC in 2006.[167]

273. MEPC considered the report of the Intersessional Correspondence Group on Greenhouse Gas Related Issues (see MEPC 57/4/5, MEPC 57/4/5/Add.1 and MEPC 57/INF.15), and acknowledged the importance of developing fundamental principles as a basis for future regulations of greenhouse gas emissions from ships. MEPC decided, by an overwhelming majority, on certain principles as its reference for further debate on greenhouse gas emissions from international shipping and also for further reflection when the nature and form of the measures to be taken were clearer. Some delegations indicated that any measures to be adopted by IMO should only be applicable to Annex I parties to the United Nations Framework Convention on Climate Change and the Kyoto Protocol. States were encouraged to submit their further views in order to reach consensus on the issue of principles at the fifty-eighth session of MEPC.[168]

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[165] The Declaration on World Food Security is available from http://www.fao.org/foodclimate/hlc-home/en. The FAO also held a four day scientific symposium, "Coping with global change in marine social-ecological systems" (Rome, 8-11 July 2008).

[166] It has been estimated that annual emissions of CO_2 from the world's merchant fleet reached 1.12 billion tons in 2007, or nearly 4.5 per cent of all global emissions, and could increase a further 30 per cent by 2020 (see MEPC 57/4/5); see also, "Shipping emissions twice level of airlines" at http://www.smh.com.au/news/environment/shipping-emissions-twice-level-of-airlines/2008/02/13/1202760398652.html.

[167] See MEPC 55/23, annex 9. See also "IMO's work on the reduction of greenhouse gas emissions from ships", at http://www.imo.org/home.asp.

[168] MEPC 57/21, at paras. 4.66-4.88. China and Brazil reserved their position on these principles and several delegations supported a compromise proposal by India.

274. MEPC also established a Working Group on Greenhouse Gas Emissions from Ships, which was instructed, inter alia, to review the short-term and longer-term measures to reduce greenhouse gas emissions from ships, and develop a CO_2 design index for new ships and a methodology for a CO_2 emission baseline.[169]

275. The first intersessional meeting of the Working Group was held in June 2008.[170] The meeting made progress on the development of: a mandatory CO_2 Design Index for new ships, which will serve as a fuel-efficiency tool at the design stage and will enable ship designs to be compared for fuel efficiency; and an interim CO_2 operational index, which has been used to establish a common approach for trials on voluntary CO_2 emission indexing (MEPC/Circ.471). The Working Group also reviewed best practices for voluntary implementation of measures to reduce emissions from ships and developed further guidance for the shipping industry on fuel efficient operation of ships, and considered economic instruments to reduce greenhouse gas emissions including, inter alia, a global levy on fuel and emission trading schemes for ships.

276. The outcome of the Working Group will be considered by MEPC at its next session in October 2008. The Committee will also consider phase 1 of the update of the 2000 IMO Study on Greenhouse Gas Emissions from Ships (MEPC 57/4/18 and Add.1), which will cover a CO_2 emission inventory from international shipping and future emission scenarios. Phase 2, covering greenhouse gases other than CO_2 and other relevant substances, as well as the identification and consideration of future reduction potentials by technical, operational and market-based measures, will be considered by MEPC in 2009 (see MEPC 57/21, paras. 4.102-4.104).

277. IMO work on the reduction of greenhouse gas emissions from ships is scheduled for completion in 2009, which will allow the IMO to submit a position paper that year to the Climate Change Conference in Copenhagen.

2. Ocean fertilization and carbon sequestration

278. *Ocean fertilization.* The thirty-first meeting of the Scientific Group of the London Convention and the second meeting of the Scientific Group of the London Protocol noted activities related to ocean fertilization, including the work of research groups. They also noted concerns expressed over the possible commercial exploitation of iron fertilization of the oceans despite significant scientific uncertainties.[171] The Scientific Groups acknowledged progress on the issue of ocean fertilization, but concluded that its Statement of concern of 2007 on large-scale fertilization remained valid.[172]

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[169] Ibid. at paras. 4.99-4.101 and 4.107. MEPC also endorsed a proposal from the Secretary-General of IMO to expedite its work on greenhouse gas emissions, in particular, in developing the CO_2 Emission Indexing Scheme and the CO_2 Emission Baseline(s) (IMO document MEPC 57/4/7).

[170] See "Oslo meeting to prepare ground on GHG reduction mechanisms", at http://www.imo.org/home.asp.

[171] LC/SG 31/16 at paras. 2.12-2.22. For example, see the joint statement of the Scientific Committee on Oceanic Research and GESAMP regarding deliberate nutrient additions to the ocean, at http://www.gesamp.org/documentextern/SCOR-GESAMP%20Press%20Release%204%20March%202008.pdf.

[172] Ibid., para. 2.29. Also see the Statement of Concern of the Scientific Groups (LC/SG 30/14, paras. 2.23-2.25), A/62/66/Add.1, para. 201, and A/63/63, para. 305.

279. The Scientific Groups requested advice from the Legal Intersessional Correspondence Group on Ocean Fertilization concerning certain provisions of the London Protocol that were relevant to its consideration of how to address, from a scientific and technical perspective, the issue of whether ocean fertilization was contrary to the aims of the London Convention and the London Protocol (LG/SG 30/14, paras. 2.28-2.29 and annex 2). They also requested Contracting Parties and the Secretariat to consolidate new information on scientific research on ocean fertilization as it becomes available and make it available to other Contracting Parties for use in assessing proposals. The Scientific Groups also adopted a list of considerations for evaluating ocean fertilization activities, including potential impacts of the project on the marine environment (ibid.).

280. The Conference of the Parties to the Convention on Biological Diversity recognized the current absence of reliable data covering all relevant aspects of ocean fertilization, without which there was an inadequate basis on which to assess their potential risks, and urged Parties and other Governments to act in accordance with the decision of the London Convention in 2007 (UNEP/CBD/COP/9/29, Decision IX/16.C). Bearing in mind the ongoing work occurring under the auspices of the London Convention and the London Protocol, the Conference of the Parties also requested parties and urged other Governments, in accordance with the precautionary approach, to ensure that ocean fertilization activities do not take place until there was an adequate scientific basis on which to justify such activities, including assessing associated risks, and a global, transparent and effective control and regulatory mechanism in place for these activities. In addition, the Conference of the Parties indicated that small scale scientific research studies within coastal waters should only be authorized if justified by the need to gather specific scientific data, and should also be subject to a thorough prior assessment of the potential impacts of the research studies on the marine environment, and be strictly controlled, and not be used for generating and selling carbon offsets or any other commercial purposes (ibid.).

281. *Carbon sequestration*. The first meeting of the Legal and Technical Working Group on transboundary CO_2 sequestration issues within the framework of the London Protocol was held in February 2008. It considered whether and how the transboundary movement of CO_2 for and during sub-seabed sequestration in geological formations relates to article 6 of the London Protocol, which stipulates that Contracting Parties shall not allow the export of wastes or other matter to other countries for dumping or incineration at sea (LP/CO2 1/1/1, paras 2 and 3.2; see also A/63/63, para. 304). The Working Group took the view that article 6 prohibited the export of CO_2 streams from the jurisdiction of one Contracting Party to any other country, whether it was another Contracting Party or not. It also agreed that article 6 would prohibit any movement from one Contracting Party to another country for disposal in that country, regardless of any commercial basis for that transfer.

282. Consequently, it was felt that an amendment to article 6 was required to permit such movements (LP/CO2 1/8, paras. 3.1-3.9). The Working Group was unable to reach a conclusion on whether the deliberate migration of CO_2 streams across boundaries within sub-seabed geological formations would constitute an export under article 6 (e.g. if the formation was transboundary in nature and such movement was expected). There was general agreement that an unintended

migration of CO_2 streams within sub-seabed geological formations would not constitute an export within the terms of article 6 (ibid., paras. 3.16-3.21).

283. The meeting developed a possible amendment to article 6 to provide for transboundary movements, including migration of CO_2 streams, and proposed amendments to the Specific Guidelines for Assessment of Carbon Dioxide Streams for Disposal into Sub-Seabed Geological Formations (ibid., paras. 3.16-3.28 and annex 3). The Scientific Group of the London Protocol also continued work on the development of a reporting format for CO_2 sequestration permits, which would be submitted to the Contracting Parties in October 2008 with a view to its adoption (LC/SG 31/16, paras. 4.1-4.16).

XII. Settlement of disputes

A. International Court of Justice

284. On 23 May 2008, the International Court of Justice rendered its Judgment in the case concerning *Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore)*.[173] The dispute between Malaysia and Singapore concerned sovereignty over three maritime features in the Straits of Singapore: Pedra Branca/Pulau Batu Puteh (a granite island on which Horsburgh lighthouse stands), Middle Rocks (consisting of some rocks that are permanently above water) and South Ledge (a low-tide elevation). In its judgment, which is final and binding, the Court found, by 12 votes to 4, that sovereignty over Pedra Branca/Pulau Batu Puteh belongs to the Republic of Singapore; it found, by 15 votes to 1, that sovereignty over Middle Rocks belongs to Malaysia; and it found, by 15 votes to 1, that sovereignty over South Ledge belongs to the State in the territorial waters of which it is located.

285. By an Order of 31 March 2008, the International Court of Justice fixed time limits for the filing of initial pleadings in the case concerning *Maritime Dispute (Peru v. Chile)*. It fixed 20 March 2009 as the time limit for the filing of a Memorial by Peru and 9 March 2010 as the time limit for the filing of a Counter-Memorial by Chile.

286. Two other cases relevant to the law of the sea are pending before the Court. In the case concerning *Territorial and Maritime Dispute (Nicaragua v. Colombia)*, the President of the International Court of Justice, by an Order of 11 February 2008, fixed 11 November 2008 as the time limit for the filing of the Counter-Memorial of Colombia. In the case *Maritime Delimitation in the Black Sea (Romania v. Ukraine)*, the Court scheduled public hearings from 2 to 19 September 2008.

B. Court of Justice of the European Communities

287. On 3 June 2008, the Court of Justice of the European Communities (EC) delivered its Judgment in Case C-308/06, *Intertanko and Others v. Secretary of State for Transport*.[174] The judgment sheds light on the relationship between inter alia,

[173] ICJ Press Release No. 2008/10, 23 May 2008, at www.icj-cij.org/docket/index.php.

[174] Press Release of the Court of Justice of the European Communities No. 35/08, 3 June 2008, at http://curia.europa.eu/en/actu/communiques/cp08/aff/cp080035en.pdf.

UNCLOS and EC Directives. In that case, organizations representing substantial proportions of the maritime shipping sector brought an action before the High Court of Justice of England and Wales regarding the implementation in the United Kingdom of Directive 2005/35/EC of the European Parliament and of the Council of 7 September 2005 on ship-source pollution and on the introduction of penalties for infringements. In their view, two provisions of the directive did not comply in several respects with two international treaties: UNCLOS and MARPOL 73/78, which define the conditions under which coastal States may exercise sovereign rights in the various marine zones. According to the organizations, those provisions of the Directive establish a stricter liability regime for accidental discharges. The national court requested the Court of Justice to rule on whether the provisions of the Directive are compatible with the two international treaties.

288. In its judgment, the Court concluded that the validity of certain provisions of the Directive, which lays down a regime governing liability for accidental discharges, cannot be assessed in the light of either MARPOL 73/78 or UNCLOS. With regard to MARPOL 73/78, the Court observed that since the Community is not a party to that Convention, the mere fact that the Directive has the objective of incorporating certain rules set out in that Convention into Community law was not sufficient for it to be incumbent upon the Court to review the Directive's legality in the light of MARPOL 73/78. With regard to UNCLOS, to which EC is a party, the Court found that UNCLOS does not establish rules intended to apply directly and immediately to individuals and to confer upon them rights or freedoms capable of being relied upon against States, irrespective of the attitude of the ship's flag State. The Court observed that the nature and broad logic of UNCLOS prevent the Court from being able to assess the validity of a Community measure in the light of UNCLOS. Consequently, the Court found that the Directive on ship-source pollution which provides for penalties in the event, in particular, of accidental discharges remains valid.

XIII. International cooperation and coordination

A. United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea

289. The ninth meeting of the Consultative Process was held from 23 to 27 June 2008 under the chairmanship of Lori Ridgeway (Canada) and Paul Badji (Senegal). In accordance with General Assembly resolution 61/222 and as reaffirmed in resolution 62/215, the Consultative Process focused its discussions on maritime security and safety. The report of the meeting (A/63/174 and Corr.1) includes agreed elements relating to maritime security and safety to be suggested to the General Assembly for consideration under its agenda item "Oceans and the law of the sea"; a summary of the discussions held during the ninth meeting; and information on additional issues that have been proposed for inclusion in the list of issues that could benefit from attention in the future work of the General Assembly on oceans and the law of the sea. In accordance with its resolution 60/30, the General Assembly, at its sixty-third session, will review again the effectiveness and utility of the Consultative Process, prompting a number of delegations during the ninth meeting to present their views on the Consultative Process (ibid., paras. 21-23).

B. Regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects

290. The Ad Hoc Steering Group, which oversees the execution of the "assessment of assessments" (see General Assembly resolution 60/30, para. 93), a preparatory stage towards the establishment of a regular process for global reporting and assessment of the state of the marine environment, including socio-economic aspects (the "regular process"), met for the third time in New York in June 2008. In accordance with its agenda (see GRAME/AHSG/3/2, annex I), the Ad Hoc Steering Group discussed progress achieved at the third meeting of the Group of Experts, which executes the "assessment of assessments". The representatives of the lead agencies of the "assessment of assessments", UNEP and IOC, presented the revised outline of the draft report (ibid., para. 14) as well as the time line for the production of the final outcome of the "assessment of assessments". In accordance with the time line, the report on the results of the "assessment of assessments" will be presented to the sixty-fourth session of the General Assembly in 2009 (ibid., paras. 22-26). In this regard, the General Assembly may wish to consider the modalities for its future consideration of that report.

291. In its decision (ibid., annex II), the Ad Hoc Steering Group expressed concern over the lack of resources available for the completion of the work for the "assessment of assessments" and the risk that financial constraints might hamper the delivery of the report. It was recognized that finalization and timely delivery of the final report would depend on the effective mobilization of financial resources in the amount of $755,000. This amount would cover further work on the "assessment of assessments"; additional meetings of the Group of Experts and the Ad Hoc Steering Group; completion of the draft report; preparation of a summary for decision makers, peer-review of the draft report and an outreach campaign to launch the final report (ibid., paras. 17-19). The Ad Hoc Steering Group stressed the need for additional financial contributions from governments to the "assessment of assessments" in response to the request made by the lead agencies.[175]

292. At its meeting, the Ad Hoc Steering Group also endorsed a progress report prepared by the lead agencies to give effect to the open-ended midterm review pursuant to paragraph 93 (c) of resolution 60/30 (GRAME/AHSG/3/2, annex II). The Group agreed that the report on progress achieved so far would be distributed at the ninth meeting of the Consultative Process, in order to give all States Members of the United Nations an opportunity to comment on and contribute to the development of ongoing work carried out under the "assessment of assessments". In accordance with the time line, such contributions by member States should be provided to the lead agencies by 30 September 2008 (ibid., annex I, para. 23). The progress report which was entitled: "Assessment of assessments — Progress report" consisted of: (a) an overview section on progress and challenges; and (b) annexes, including preliminary outlines of the various sections of the final report (ibid., annex I, para. 14; A/63/174, paras. 134-138). A consolidated report will be presented at a critical final meeting of the Ad Hoc Steering Group in 2009 (GRAME/AHSG/3/2, annex II).

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[175] Letter from Achim Steiner, Under-Secretary-General and Executive Director of UNEP and Patricio Bernal Executive Secretary, IOC/UNESCO, dated 21 May 2008 on "Renewed request for funding of the 'Assessment of assessments': (UNGA 60/30 Regular Process)".

293. Relevant United Nations entities, agencies, organizations and programmes continue to provide scientific contributions to the "assessment of assessments". As noted at the third meeting of the Ad Hoc Steering Group, GESAMP has submitted and finalized its report on the review of marine pollution in the open ocean (A/63/174, para. 136). The Scientific Group of the London Convention and the Scientific Group of the London Protocol also intend to prepare a substantial contribution to the regular process, from the perspective of the London Convention and London Protocol (see also A/62/66/Add.1, para. 251). It would include a description of the reporting and assessment methodologies used by Contracting Parties and would be completed by June 2009 (LC/SG 31/16, paras. 8.22-8.30).

C. Oceans and Coastal Areas Network

294. The Oceans and Coastal Areas Network (UN-Oceans), the inter-agency mechanism for the coordination of United Nations activities related to oceans and coastal areas, held its sixth meeting on 2 and 3 June 2008 in Paris, at UNESCO Headquarters. Participants discussed, inter alia, progress made by the thematic task forces through which UN-Oceans operates, developments relating to the "assessment of assessments", and inputs to the ninth meeting of the Consultative Process (A/63/174, paras. 129-133). Information on the results of a survey in the One UN Pilot countries and a presentation on marine ecosystem valuation were also provided, as well as updates on GESAMP (see paras. 297-300 below) and the United Nations Atlas of the Oceans. Finally, participants commented on possible strategic planning for future directions of UN-Oceans.

295. With regard to the Task Force on Biodiversity in Marine Areas beyond National Jurisdiction, it was reported that activities included the ongoing development of a webpage in order to contribute to the knowledge-base in this area (see http://www.un.org/Depts/los/biodiversityworkinggroup/marine_biodiversity.htm). The Task Force on Marine Protected Areas and Other Area-based Management Tools reported that it had contributed to and participated in the ninth meeting of the Conference of Parties and would provide input to the scientific experts' workshop established to further the relevant Convention on Biological Diversity process.

296. In relation to the "assessment of assessments", concerns were expressed with regard to poor coverage of assessments in open oceans and information gaps for some regions. Concern was also expressed regarding budgetary constraints to implement the mandate given by the General Assembly. The results of a survey conducted among six UN-Oceans members (FAO, IMO, UNDP, UNEP, UNESCO/IOC, and the World Bank) on coastal and marine projects carried out at the national or regional level in the One UN Pilot countries (Albania, Cape Verde, Mozambique, Pakistan, the United Republic of Tanzania, Uruguay, and Viet Nam) were presented. The survey demonstrated the sectoral nature of coastal and marine projects and potential for enhanced synergies among United Nations agencies, especially in the area of the management of marine living resources at the regional level. The meeting agreed to continue studying this issue in order to improve coordination among ocean-related United Nations organizations prior or during common country programming processes.

D. Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection

297. The thirty-fifth session of GESAMP, held in May 2008, was hosted by UNIDO and included a special session on "Marine environmental protection and science in the west and central African context". The session highlighted issues of relevance for the region and lessons learned on marine environmental assessments and how these translated at the global scale, using the West African region, and in particular the Guinea Current LME, as an example.

298. The Executive Committee of GESAMP met prior to and at the end of the thirty-fifth session[176] to discuss, inter alia, revisions to the rules of procedures of GESAMP; the status of the GESAMP pool of experts and development of a new website; the nomination of new GESAMP members and establishment of a new GESAMP office. With regard to the modus operandi of GESAMP, during 2007-2008, work has continued on updating the MOU on GESAMP, following extensive input from the sponsoring organizations and their legal departments. The updated, consolidated text will be submitted for clearance to the legal divisions of the sponsoring organizations, with the intention of having an agreement signed by the Executive Heads of the sponsoring organizations, as soon as practicable.

299. In addition, and since the last reporting period, GESAMP has published the following reports and studies: (a) "estimates of oil entering the marine environment from sea-based activities" (IMO), 2007; (b) "assessment and communication of environmental risks in coastal aquaculture" (FAO), 2008; and (c) "report of the 34th session of GESAMP" (UNESCO-IOC), 2007.[177] In addition, GESAMP also published its first electronic report, entitled "Science and regional organizations: how can GESAMP help with current needs and future challenges?"

300. GESAMP is also revising its submission to the "assessment of assessments" with the objective to possibly issue a GESAMP publication on the issue of pollution in the open ocean. GESAMP will host the fourth meeting of the Group of Experts in November 2008.

XIV. Capacity-building activities of the Division for Ocean Affairs and the Law of the Sea

301. In accordance with its mandate, the Division has continued to develop activities (organization of briefings, workshops and training courses) aimed at assisting States, in particular developing States, in the consistent and uniform application of the provisions of UNCLOS, in addition to fostering a comprehensive understanding of new developments related to ocean affairs and the law of the sea.[178] Recent developments are described below.

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[176] The Executive Committee consists of the representatives of the sponsoring organizations (Technical Secretaries), the Administrative Secretary (appointed by IMO), as well as the Chairperson and Vice-Chairperson (both scientists) of GESAMP.

[177] See GESAMP Reports and Studies Nos. 75, 76 and 77, respectively.

[178] For additional information on the capacity-building activities and other technical assistance programmes of the Division, see www.un.org/Depts/los/index.htm.

A. Fellowship programmes

302. *Hamilton Shirley Amerasinghe Fellowship Programme*. Because of lack of funding (see A/63/63, para. 389), the Division was unable to implement the twenty-second Hamilton Shirley Amerasinghe award (ibid., para. 388) and did not solicit applications for the twenty-third award.

303. *United Nations — Nippon Foundation of Japan Fellowship Programme*. The 2007-2008 Fellows, nationals from Antigua and Barbuda, Benin, Brazil, Cameroon, Colombia, Comoros, Indonesia, Kenya, the Philippines and Thailand, have now completed the Programme.

304. Meanwhile the 2008-2009 Fellows — nationals from Cameroon, Ghana, Guatemala, Guyana, India, the Islamic Republic of Iran, Mozambique, the Syrian Arab Republic, Thailand, and Turkey — have been placed with a prominent host institution for their first phase placements to undertake an individually customized research programme in ocean affairs and the law of the sea, or related discipline.[179] The Fellows will continue their programmes under the auspices of the Division during the subsequent three-month phase of the Fellowship.

305. The application deadline for the 2009-2010 Fellowship awards was established for 15 August 2008, and the Fellowship Selection Committee will convene within two months of the deadline to review the applications and award ten Fellowships. Successful candidates will commence their programmes in early 2009.[180]

B. Training courses

306. The Division continued its efforts to promote the delivery of training courses through the TRAIN-SEA-COAST programme (see http://www.un.org/Depts/los/tsc_new/TSCindex.htm.). In particular, arrangements are under way for the delivery in Mombasa, Kenya, in cooperation with UNEP, of a course on the development and implementation of ecosystem approaches to the management of human activities in the oceans (see para. 156 above). The training material was developed by the Division following the recognition by the international community of the need to manage human activities that have an effect on the marine environment and its ecosystems in an integrated and cross-sectoral manner in order to promote the sustainable development of oceans and seas and their resources.[181] It is recalled that the General Assembly has emphasized the importance of applying an ecosystem approach to the management of ocean-related activities, including by integrating ecosystem approaches into fisheries conservation and management (see para. 155 above).

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[179] The 2008-2009 participating host institutions include St. Mary's University (Canada), Dalhousie University (Canada), National University of Ireland — Galway (Ireland), Université de Nice Sophia-Antipolis (France), Edinburgh University (United Kingdom), The Max Plank Institute (Germany), University of Massachusetts — Boston (United States), Southampton University (United Kingdom) and Melbourne University (Australia).

[180] Further information, including the past Fellows' research papers, application files and an up-to-date list of participating institutions, is available at www.un.org/depts/los/nippon.

[181] The World Summit on Sustainable Development also encouraged the application of the ecosystem approach by 2010.

307. GPA continued to deliver, in partnership with UNESCO-IHE (Institute for Water Education), its TRAIN-SEA-COAST course on "Improving municipal wastewater management in coastal cities". Courses were delivered in Barbados, Ghana, Jamaica and Kenya.[182]

C. Trust funds[183]

308. *Voluntary trust fund for the purpose of facilitating the preparation of submissions to the Commission on the Limits of the Continental Shelf for developing States, in particular the least developed countries and small island developing States, and compliance with article 76 of the United Nations Convention on the Law of the Sea.* After the establishment of the option to request financial assistance from this trust fund by way of grants, which addressed the difficulties of those States that may not be in a position to sustain the costs of a submission up front, the first five grant agreements were signed during the first half of 2008, to provide financial assistance to, respectively, the Federated States of Micronesia, Fiji, Kenya, Seychelles and Solomon Islands.[184] During the reporting period Ireland contributed $77,730.00 to this trust fund. Furthermore, Ireland pledged €100,000, to be paid in two annual instalments of €50,000 in 2009 and 2010. According to the provisional statement of accounts, the fund balance at the end of July 2008 was estimated to be $2,273,582.

309. *Voluntary trust fund for the purpose of defraying the cost of participation of the members of the Commission on the Limits of the Continental Shelf from developing States in the meetings of the Commission.* During the reporting period from 1 January to 31 July 2008, contributions to this trust fund were received from Japan ($41,000.00) and Ireland ($77,730.00). Furthermore, two States made pledges for future contributions, as follows: Mexico ($7,500 to be contributed by the end of 2008), and Ireland (€150,000, to be paid in three annual instalments of €50,000 in 2009, 2010 and 2011). According to the provisional statement of accounts, the fund balance at the end of July 2008 was estimated to be $596,627.

310. *Voluntary trust fund for the purpose of assisting developing countries, in particular least developed countries, small island developing States and landlocked developing States, in attending meetings of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea.* The trust fund plays an important role in facilitating the participation of experts from developing countries in the meetings of the Consultative Process. Representatives from the following 12 countries, including most panellists, received assistance from the voluntary trust fund in the form of economy class round-trip tickets from their respective countries in order to attend the ninth meeting of the Consultative Process, in June 2008:

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[182] For more information visit: http://www.training.gpa.unep.org/content.html.

[183] Developments relating to the Assistance Fund under Part VII of the United Nations Fish Stocks Agreement, in respect of which the Division collaborates with FAO in the administration of the Fund, are presented in the report of the Secretary-General on sustainable fisheries (see A/63/128, paras. 155-157).

[184] The members of the Independent Panel of Experts, which assisted the Division in the examination of applications to the trust fund in 2007-2008, were as follows: the Permanent Representatives of Mexico, Norway, Papua New Guinea, Portugal, and Senegal, and the Deputy Permanent Representatives of Japan and the Russian Federation. To date, the Independent Panel of Experts met in May and August 2008.

Bahamas, Barbados, Burkina Faso, Egypt, Ghana, Maldives, Mongolia, Morocco, Nepal, Pakistan, Suriname and Yemen. The total expenditure for their travel amounted approximately to $37,360. Insufficient funds did not allow disbursement of daily subsistence allowance to any of the invited panellists as envisaged in the revised terms of reference of the Trust Fund in accordance with General Assembly resolution 62/215 (see A/63/63, para. 402).

311. According to the provisional statement of accounts for the period ending 30 June 2008, the fund balance was estimated to be $12,090. No contributions have been made to the voluntary trust fund since 2004, despite calls from the General Assembly which, in its resolution 62/215, expressed its serious concern regarding the insufficient resources available in the voluntary trust fund, and urged States to make additional contributions to it. Should the mandate of the Consultative Process be renewed (see para. 289 above), additional donations would be urgently required to allow the voluntary trust fund to continue providing assistance to representatives of developing States in order to cover the costs of their travel, and upon eligibility, to receive daily subsistence allowance, pursuant to resolution 62/215.

312. *Voluntary trust fund for the International Tribunal for the Law of the Sea.* There have been no applications to this voluntary trust fund since the application of Guinea-Bissau in 2004. As at 31 July 2008, according to the provisional statement of accounts, the fund balance was estimated to be $109,886.